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Curating a responsible digital world

DIGITAL UNIVERSITY KERALA

Kerala University of Digital Sciences, Innovation and Technology

N E W S L E T T E R

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Induction Program for 2023-25 Batch Students

Digital University Kerala hosted a Grand Induction Program for our 2023-2025 batch students. Our newest cohort of students has officially embarked on a transformative journey of learning, innovation, and growth. The Induction Program served as a warm welcome into the world of endless possibilities and cutting-edge education.
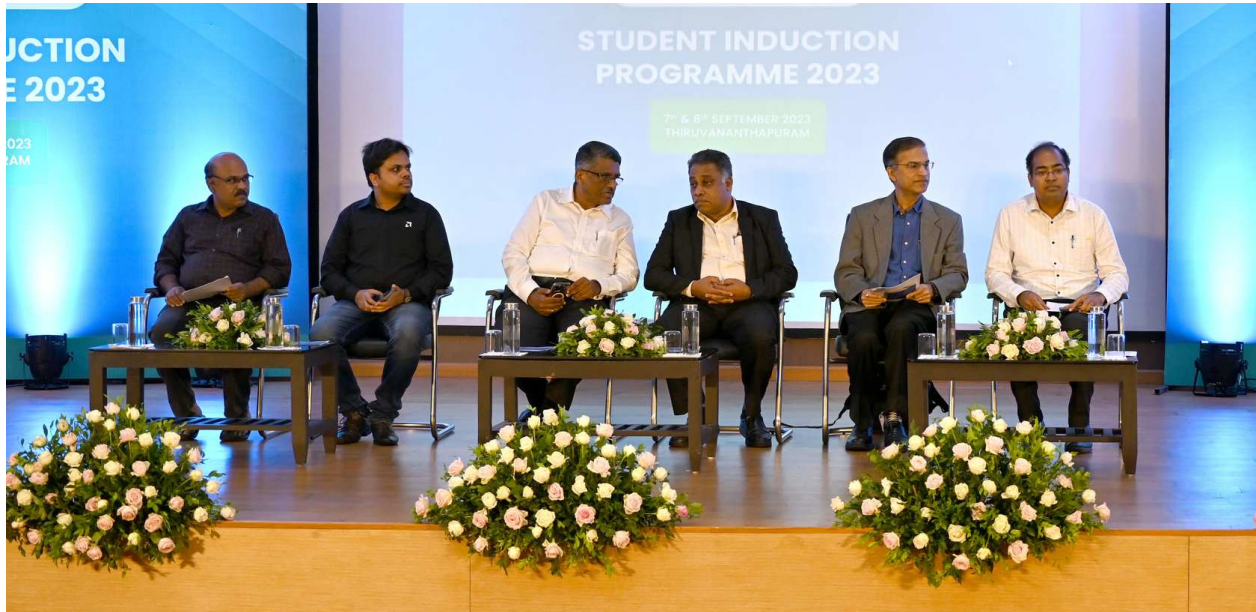
Induction Program for 2023-25 Batch Students
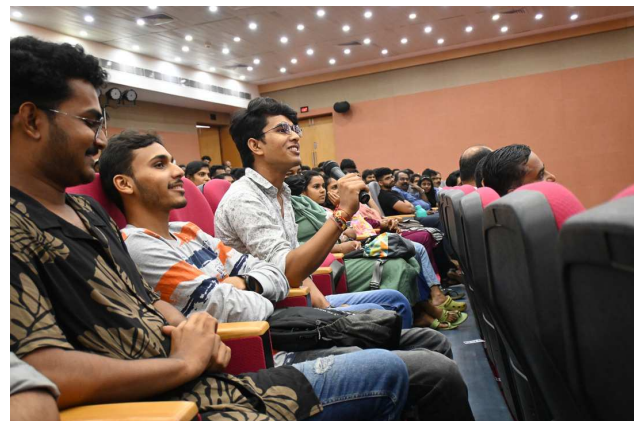
Induction Programme for the New Batch of Students of Computer Science and Engineering

The orientation programme for the 2023 batch held at DUK from the 11th to the 15th of September was a resounding success, providing students with an insightful glimpse into the dynamic and ever-evolving world of technology. Over the course of five days, students were exposed to a diverse range of topics, ensuring they are well-prepared to embark on their academic journey in computer science.

Day 1 (11th September 2023)

The programme began on Monday, the 11th of September. In the morning, students delved into the realm of cybersecurity exploration, guided by the experienced Prof. Tony Thomas and his team. Following this, Prof. Asharaf S and Mr. Adarsh S enlightened the students on Blockchain and Web3. After a much-needed lunch break, Dr. Gopakumar introduced the students to the Knowledge Centre, and Prof. Sumit Datta discussed IEEE activities at DUK. The day concluded with an extempore session led by Dr. Sumedha and Dr. Shanujas.

Day 2 (12th September 2023)

On Tuesday, the focus shifted to Next Generation Networking and Security in a hands-on session led by Dr. Preetam Mukherjee and his team. Ajeesh A Rasheed, Senior Manager at Accenture, shed light on industry expectations from graduates. After lunch, Prof. Sinnu Susan Thomas explored Artificial Intelligence and the Women's Cell. The day concluded with a yoga session, promoting holistic well-being.

Day 3 (13th September 2023)

Wednesday brought an industrial visit to UST Global, offering students valuable exposure to real-world tech environments. The afternoon session revolved around key technologies and challenges in IoT edge computing, delivered by Dr. Sumedha Arora. Group discussions, facilitated by Dr. Sumedha and Dr. Sini, provided students with opportunities to engage in constructive dialogues.

Day 4 (14th September 2023)

Thursday began with a session by Dr. Malu G explored the digital transformations necessary for sustainable progress. Activities coordinated by the Connected Systems Lab followed. The day ended with a session on Security Auditing at KSAAC led by Dr. Meraj.

Day 5 (15th September 2023)

The final day of the orientation programme commenced with Dr. Sujoy Madhab Roy's exploration of the basics of computer science. EY's team then discussed how digitalization is impacting audits. After lunch, Prof. Elizabeth Sherly introduced students to generative artificial intelligence, and the programme concluded with activities coordinated by CEBC & VRCLC. Overall, the orientation programme was a comprehensive and enlightening experience for the students, equipping them with knowledge and insights into various facets of technology. DUK remains committed to nurturing the next generation of tech leaders, and this orientation programme was a significant step in that direction. Students now eagerly anticipate their academic journey in computer science, armed with the knowledge and enthusiasm they've gained during this orientation.

DUKInnoFest'23

DUKInnoFest'23: Celebrating a Year of Innovation and Inspiration as we mark the 1st birthday of the Innovation Club, celebrated by organizing the Smart India Internal Hackathon!!

DUKInnoFest'23

Session on "Real-Life Cases of Business Analytics Projects in the Industry

A session on "Real-life cases of Business Analytics projects in the industry" was organized for the benefit of students by the School of Digital Humanities & Liberal Arts on 14 Sept. 2023. The session was taken by Roopa M, Lead, AI-ML initiatives for Data Management, Tata Consultancy Services. Through real-life case studies, the talk gave insights on the practical aspects of implementing Business Analytics in the industry.

Talk on Digital Transformation in Banking & Finance Sector

A talk on "Digital Transformation in Banking & Finance sector" was organized by the School of Digital Humanities & Liberal Arts on 14th September, 2.00 to 3.15 PM. The session was open to all the students. Industry expert, Sunil P, Former Sr. Delivery Head, Finastra, Technopark gave a detailed presentation on the way digital transformation is evolving in banking and finance by the adoption of latest technologies.

C-BioAI Sagenome Visit

As part of the Industry Readiness Program of the Centre for Bio AI, School of Digital Sciences, DUK, the MSc Data Analytics and Bio AI students (S3) of Digital University Kerala visited the Sagenome Lab and attended a workshop on "Molecular Biology & Bioinformatics" under PRODI-G, the Academics and Research Division of Sagenome Pvt. Ltd, on the 28th of September 2023 with Dr. Sherin DR (Assistant Prof., SODS).

The workshop began with a session by Dr. Dinesh Roy about Genomics, its significance and its practical application in various fields of science and medicine. The sessions continued with talks by Ms. Kanchana S.B Nair, Technical Assistant (Genome Laboratory Operations), Ms. Resmi Maxim, Nutritionist and Lifestyle Coach and Consultant, and Mr. Bijesh George, Senior Technical Specialist and Bioinformatics Lead. There were discussions on how 'Oh My Gene', a healthcare platform under Sagenome Private Limited works and offers solutions for precision healthcare, disease treatment, and disease prevention such as 'Genestrology test', and wellness management strategies

A Lab tour was conducted after an engaging session on the workings of various machines, led by an expert in the field. The session was designed to provide participants with a fundamental understanding of the principles and mechanisms behind different types of machines used in a laboratory or industrial setting in the area of Genomic and Genetic testing.

Also, discussions took place on how maintaining a properly balanced diet is crucial for overall health and well-being. During the session, attendees were provided with a major understanding of the field of Bioinformatics, discussions on internship opportunities, various career scopes within the area, and the potential for future employment with the company.

Student Team Participates in Wings 2023-PMI-Kerala Academic Conclave

The DUK Project Management Institute Academic Forum members gathered at Saintgits College of Engineering. Kottayam to attend the WINGS-2023 Conclave. The theme of the conclave, "Accept. Adapt. Transform" echoed throughout the proceedings, inspiring attendees to push the boundaries of their knowledge and creativity. The keynote speakers, experts from various fields, delivered thought-provoking talks that left the students inspired and eager to explore the limitless possibilities in solving global problems through project management. With more than 500 attendees, the students got the opportunity to network with industry professionals and like-minded individuals from various institutions

DUK Student Team Receives the Best Conference Paper Award at WINGS 2023

Two of our students, Anjana P Rajesh and Vedavyasan Anil have been awarded the Best Conference Paper Award at the recent academic conclave, WINGS 2023 held at Saintgits College of Engineering, Kottayam. Their paper, titled "Measuring the success of social projects through project management framework" not only demonstrated a profound understanding of the subject matter but also highlighted a practical application that promises to improve the performance of social projects.

DUK Organized an Innovation and Entrepreneurship Outreach Programme for School Students

The Institution's Innovation Council of Digital University Kerala organized an Innovation and Entrepreneurship Outreach Programme for school students. This programme aimed to nurture the innovative ideas of school children and encourage them to design and solve real-world challenges. Dr. Malu G, Research Officer, led the sessions. Seven students from the third semester of M.Sc. Machine Intelligence supported her during the programme.

DUK Conducted One Day Workshop on Open - Source IC Design for Classes 6 to 10

The School of Electronic Systems and Automation at Digital University Kerala hosted an exciting and educational workshop on chip design on 23 September at Digital University Kerala for young minds aged 10 to 15. The workshop provided a unique opportunity for kids to explore the fascinating world of chip design. The hands-on activities and interactive sessions delivered the participants valuable insights into the technology that powers our digital world. It was a day filled with creativity, learning, and the promise of a brighter, tech-savvy future!

Session on Accelerators/Incubation - Opportunities for Students & Faculties - Early Stage Enterpreneurs

A session on Accelerators/Incubation - Opportunities for Students & Faculties -Early-Stage Entrepreneurs was conducted by Institution's Innovation Council (IIC), Digital University Kerala on August 24th, 2023. The event provided valuable insights to students, faculties, and early-stage entrepreneurs about opportunities available in startup ecosystem and various campus incubation programs offered by Kerala Startup Mission. Mr. Krishnakumar, Head of Leap, South Kerala, Kerala Startup Mission led the session in which various support provided by Kerala Startup Mission including mentorship, resources, funding, and networking opportunities were highlighted.

DIGIFUSION
Fresher's Day 2023 - Digital University Kerala

The event kicked off at sharp 10am on 17th of September with the inauguration ceremony at Kabani Hall, overseen by Mr. Md Meraj Uddin, Chairman of Students' Affairs of DUK. In a captivating moment, Mr. Meraj sprinkled sparkling dust onto a board, unveiling the event's name - Digifusion. Following this, the cultural programs began, featuring a mix of songs and dance performances by both senior and junior students. At the middle of the cultural performances, a lively ice-breaking session was introduced to add excitement. This session included various tasks such as spot dances and ramp walks, ensuring that the students remained engaged and entertained. At noon, a delightful lunch was provided, and concurrently, the voting for the titles of Mr. and Ms. Fresher commenced. After lunch, the highly anticipated Treasure Hunt took place. Each team received a series of clues that led them on a thrilling journey throughout the entire campus. Following this enjoyable experience, the evening came alive with a sensational music show by the Bakery Junction Band at Kabani Hall. The hall was lit with radiant lights, pulsating music, and boundless energy. The event came to closure at around 7pm with the announcement of the titles of Mr. and Ms. Fresher, along with the photography sessions. True to its name, the event truly lived up to its name as a fusion of diverse talents and programs, making it a remarkable day for each and everyone.

DIGIFUSION

Fresher's Day 2023
Digital University Kerala

SOCIAL ENGAGEMENT CENTRE (SEC)

Quiz Competition and Photography Contest

Social Engagement Centre (SEC), Digital University Kerala conducted a Quiz competition and a Photography contest on the occasion of the World Environment Health Day, on 26th September 2023.

The Quiz competition was conducted by the Core Committee of the SEC, composed of student volunteers. Initial round was a paper-pen test among the 11 teams (of two members) present and the second round was held among the four teams. Vivek B Krishna, (MSc Data Analytics with Specialization in Geo Informatics) and Sreya K Raj, (MSc Data Analytics with Computational Science) were the quiz masters. Team Phoenix (Devika Renjith & Ann Maria Josmon) secured the first place and Team RB (Rahulraj P V & Benitto Angelose) won the second prize.

The Photography Competition was an opportunity for participants to showcase their creativity and talent through their lens. The theme of the competition was "Nature and Sustainable Development". The judges evaluated the photographs based on their composition, creativity, and relevance to the theme. The winning photograph was submitted by Gonguntla Pranathi of 1st year MSc (Ecological Informatics).

Winners
Quiz Competition and Photography Contest

First Prize Quiz Competition

**Devika Renjith & Ann Maria Josmon
(Team Phoenix)**

Second Prize Quiz Competition

**Rahulraj P V & Benitto Angelose
(Team RB)**

winner Photography Contest

**Gonguntla Pranathi
1st year MSc
(Ecological Informatics)**

PLACEMENT CELL

Mock Aptitude Test for the third semester students for attending Tata Elxsi Campus Recruitment Drive on 11th September 2023.

Placement Cell conducted a mock aptitude test on 11th September 2023 for third semester students as a part of preparatory session for attending Tata Elxsi Recruitment Drive. Almost 140 students attended the exam and the session was addressed by Dr. Sini V Pillai, Placement Chair.

Preparatory sessions on Interview Skills for the third Sem students for attending Tata Elxsi Campus Recruitment Drive on 12th September 2023 and 13th September 2023

Preparatory Sessions on Interview Skills took place on the 12th and 13th of September 2023, for the third semester students for equip them for the upcoming Tata Elxsi Campus recruitment drive. These sessions held at the Gallery Hall 45, and we had the privilege of having Mr. Bejoy Peter, a seasoned Corporate Trainer, as the facilitator.

These sessions were an excellent opportunity for all the students to enhance their interview skills and make a positive impact on our career prospects. Mr. Peter is renowned for his engaging and interactive training style, made those sessions highly valuable.

Conduction of Third Physical Networking session and Final Examination for Batch 2 Post Graduate Certificate program in Entrepreneurship: Small Business Management on 22nd September 2023

Third networking session and final examination for Batch 2 PGCSBM students were conducted on 22nd September 2023 at DUK campus. 131 eligible participants attended the third Physical networking session and final examination was conducted on the same day . A final project Review and Evaluation was overseed by Dr. Sini V Pillai, Assistant Professor, School of Digital Humanities and Liberal Arts.

Placements (2022-2024 Batch)

Tata Elxsi

We are excited to announce that 13 students got placed in Tata Elxsi Campus recruitment drive.

Federal Bank

Prof (Dr). A Mujeeb, appointed as the Registrar of Kerala University of Digital Sciences, Innovation and Technology (Digital University Kerala)

Prof (Dr). A Mujeeb, Senior Professor, International School of Photonics, Cochin University of Science and Technology (CUSAT) has been appointed as the first Registrar of Kerala University of Digital Sciences, Innovation and Technology (Kerala Digital University). Dr. Mujeeb assumed charge on 21.09.2023.

Prof (Dr). A Mujeeb, presently member of the Academic Council of Cochin University of Science and Technology (CUSAT), was formerly Member of the Syndicate of Mahatma Gandhi University, CUSAT and was in the executive council of APJ Abdul Kalam Technological University.

He had served as the Director, of International School of Photonics CUSAT and LBS Centre For Science & Technology, Government of Kerala. He has completed M.Sc and M.Phil from the University of Kerala and did Ph.D at ISRO in Optoelectronics from University of Kerala. He has 28 years of teaching experience and is a Research Guide in the field of Photonics. He has more than 150 national & international publications to his credit.

PUBLICATIONS

Conference Paper

- "Detection and Hardening Strategies to Secure an Enterprise Network", 19th International Conference on Information and Systems Security, Preetam Mukherjee, Sabu M Thampi, Rohith N, Bishwajit Kumar Poddar, and Ipshita Sen. This paper also introduces the XploitMAP tool for attack modeling, which was developed by DUK students (figure uploaded).

- Security Risk Assessment of Metaverse Based Healthcare Systems Based on Common Vulnerabilities and Exposures (CVE), Ravi Prakash, Gayathri R Nayar, Tony Thomas, 2023 IEEE International Conference on Recent Advances in Systems Science and Engineering (RASSE)

Journal Article

- Elangovan, K., Sukumaran, V. B., & Sreekantan, A. C. (2023). Geometric Programming Assisted Conversion Time Reduction Technique Applied to a Multiregime-Based Digitizer for Wide Span Resistive Sensors. IEEE Transactions on Instrumentation and Measurement, 72, 1-4.

WEBSITE OF THE MONTH

Freesound

https://freesound.org/

Freesound.org is an invaluable online resource for sound enthusiasts, musicians, and creators of all kinds. This collaborative platform provides a vast and diverse collection of user uploaded audio samples and recordings, making it a treasure trove of sonic inspiration. From ambient sounds to musical instrument samples, environmental recordings, and more, Freesound.org is a hub for those seeking high- quality, freely accessible audio assets. Users can browse, search, and download sounds for their creative projects, whether for music production, film, podcasts, or game design. With a supportive community and an open ethos of sharing, Freesound.org fosters a vibrant ecosystem where sounds are not only accessible but also contribute to the global soundscape of creativity. Whether you're a seasoned professional or an aspiring artist, this platform offers a wealth of sonic possibilities.
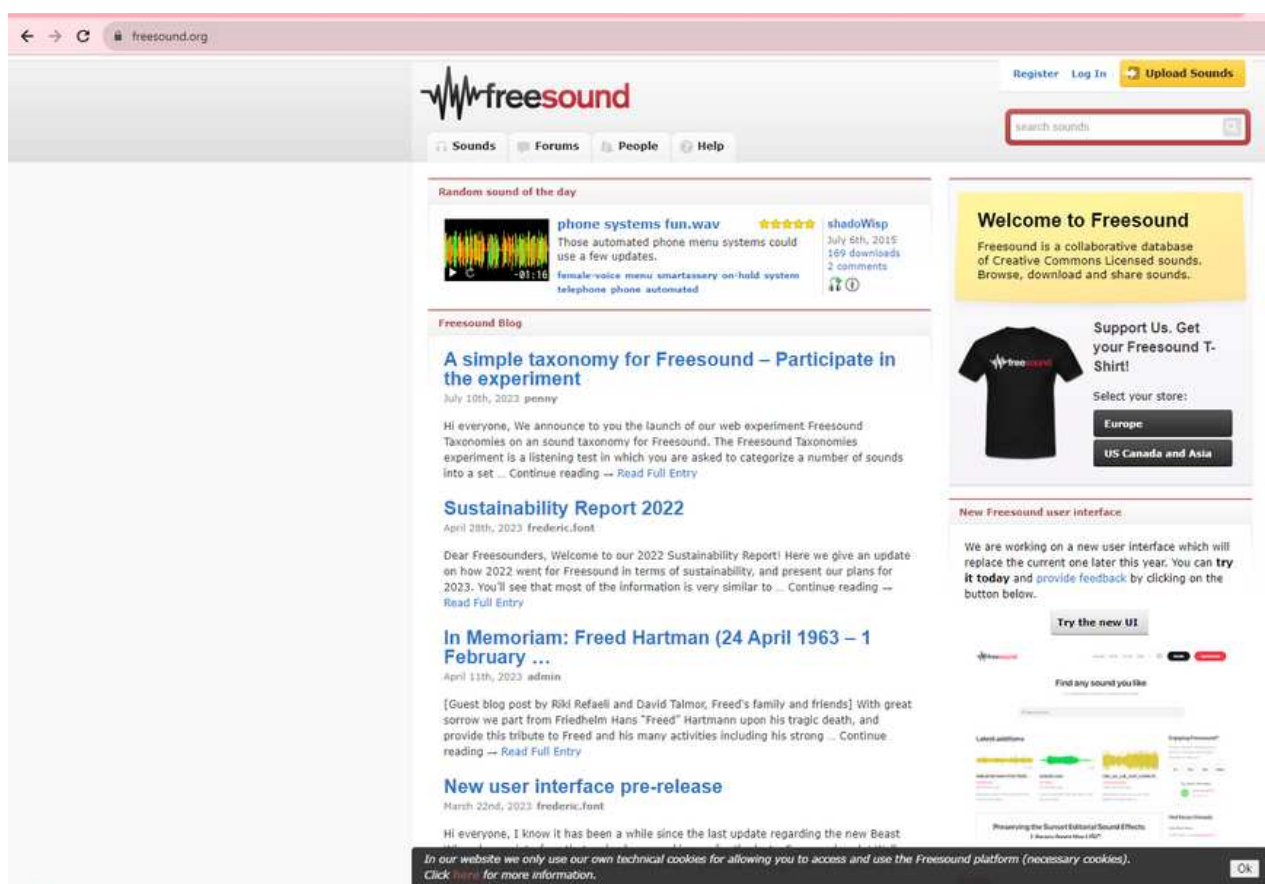
SOFTWARE OF THE MONTH

Blender

https://www.blender.org/

Blender is a powerful and versatile open-source 3D computer graphics software that has gained widespread popularity for its robust feature set and accessibility. It is known for its 3D modeling, animation, rendering, and even video editing capabilities. Blender supports a wide range of file formats and includes an array of modeling tools, sculpting features, and an animation system. Notably, it's used in various industries, including animation, video game development, visual effects, and architectural visualization. Blender's user community is active and engaged, creating a wealth of tutorials and add-ons, making it an excellent choice for both professionals and hobbyists in the 3D graphics field. One of its standout features is that it's entirely free, making it an accessible option for those looking to explore the world of 3D content creation.
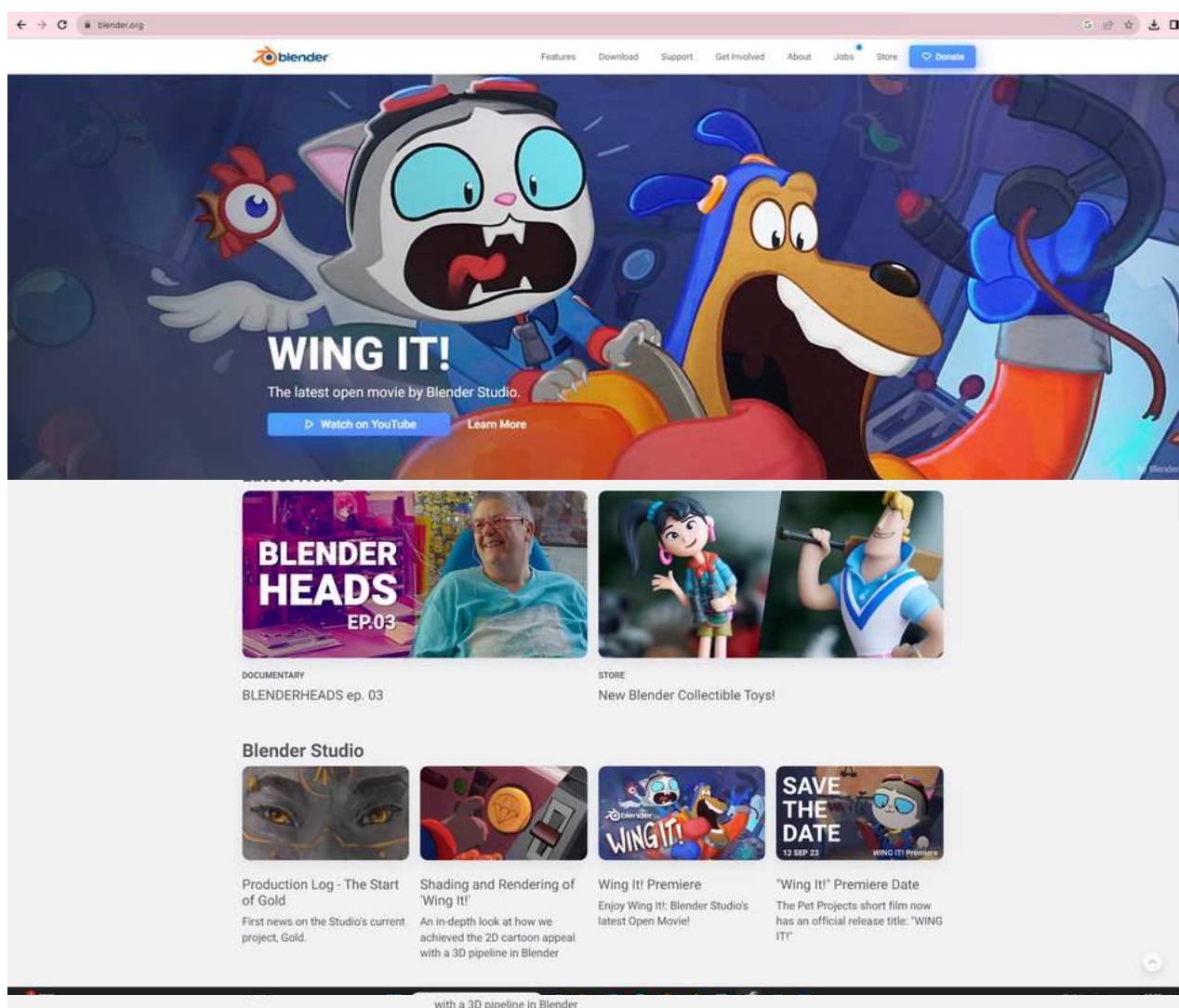
Book Review of the Month

Ambedkar: A Life, Biography By Shashi Tharoor

Shashi Tharoor's book biography effectively portrays Dr. B.R. Ambedkar's life narrative with clarity, deep insight, and great respect. Tharoor follows Ambedkar's life from his birth on April 14, 1891, into a Mahar family in the Bombay Presidency through his death onDecember 6, 1956, in Delhi. Throughout the biography, Tharoor emphasises the multiple hurdles and societal biases that Ambedkar experienced due to his origin in a marginalised society. He also highlights Ambedkar's constant desire to conquer every challenge.
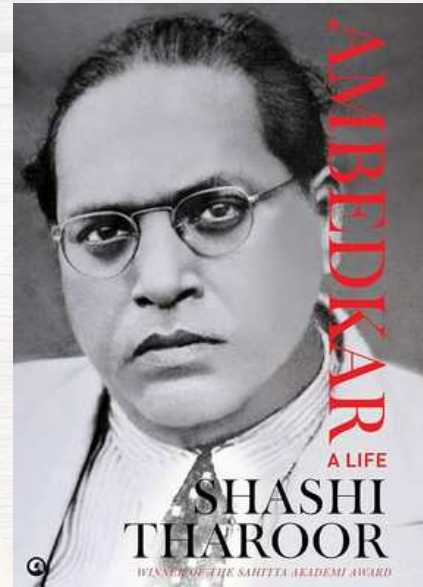
The biography delves into various aspects of Ambedkar's life, such as his constant efforts to abolish untouchability, his disagreements with other prominent political and intellectualfigures of his time, such as Gandhi and Nehru, and his dedication to creating a visionary Indian Constitution that enshrined individual rights and modern concepts of social justice. Also, he believed in the transforming potential of education and founded organisations suchas the People's Education Society and Siddharth College to help the marginalised. In the Indian political scene, Ambedkar was a significant leader. He made the Scheduled Caste Federation and eventually converted to Buddhism, inspiring many to do the same to oppose caste-based oppression. He led initiatives to remove untouchability and promote the rights of the Dalit (previously "untouchable") population. The Mahad Satyagraha and the burning of Manusmriti, a symbol of caste-based prejudice, were crucial milestones in this battle. According to Tharoor, Ambedkar played a crucial role in improving the lives of futuregenerations by bringing an old civilisation into the contemporary period with incredible strength of his mind and the ability to influence his works.

Thoroughly analysing- this book gives readers a new and comprehensive knowledge of one of India's most significant leaders. Overall, Ambedkar: A Life is an excellent biography of afascinating and considerable character. Anyone interested in Indian history and politics should read it.

Jeffin Joy
2nd Year, MBA

New Additions to the Knowledge Centre Collection

Web Application Development with MEAN : Unlock the Power of the MEAN Stack by Creating Attractive and Real-World Projects

Unlock the power of the MEAN stack by creating attractive and real-world projects About This Book * Learn about the different components that comprise a MEAN application to construct a fully functional MEAN application using the best third-party modules * A step-by-step guide to developing the MEAN stack components from scratch to achieve maximum flexibility when building an e-commerce application * Build optimum end-to-end web applications using the MEAN stack Who This Book Is For This learning path is for web developers who are experienced in developing applications using JavaScript.
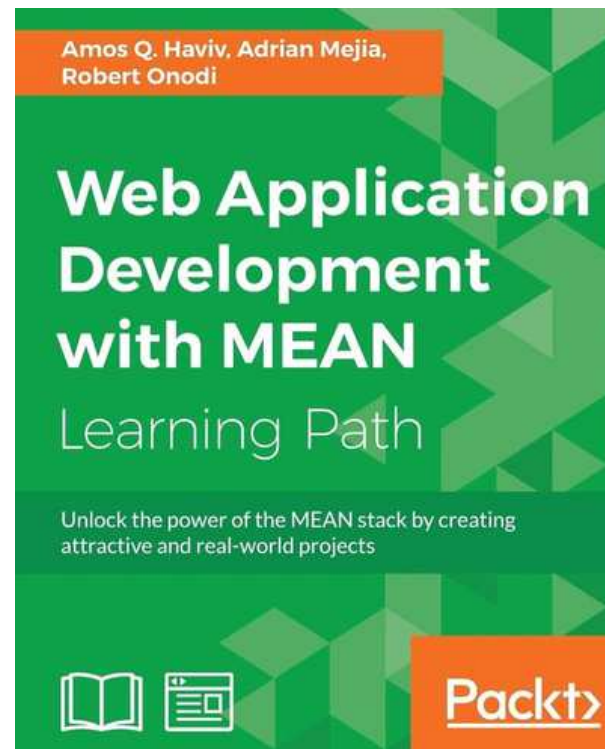
Source :Amazon
Haviv, Amos Q (2016) *Web application development with MEAN,* Mumbai, Packt, 2016.
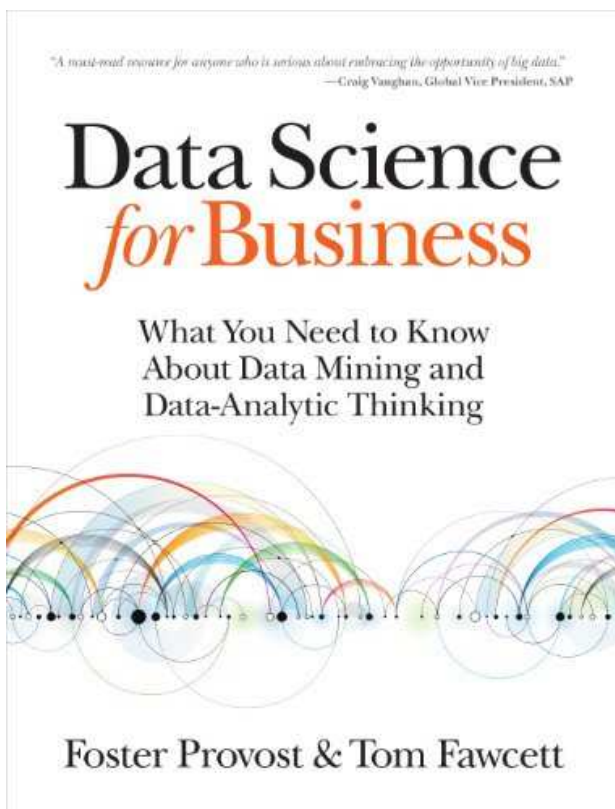
Data Science for Business : What you Need to Know About Data Mining and Data-Analytic Thinking

Written by renowned data science experts Foster Provost and Tom Fawcett, Data Science for Business introduces the fundamental principles of data science, and walks you through the "data-analytic thinking" necessary for extracting useful knowledge and business value from the data you collect. This guide also helps you understand the many data-mining techniques in use today.

Based on an MBA course Provost has taught at New York University over the past ten years, Data Science for Business provides examples of real-world business problems to illustrate these principles.

Source :Amazon
Provost, Foster (2023) *Data science for business : What you need to know about data mining and data-analytic thinking.* Mumbai, Shroff Publishers.
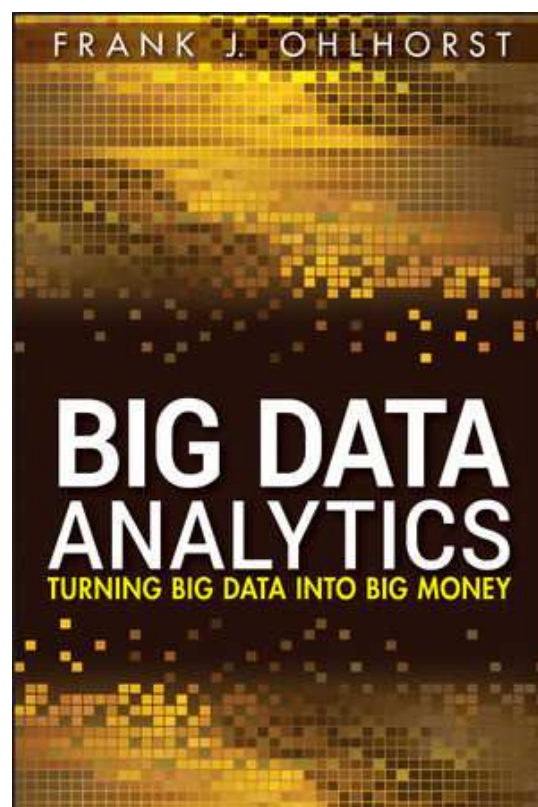
Big Data Analytics: Turning Big Data into Big Money

Focusing on the business and financial value of big data analytics, respected technology journalist Frank J. Ohlhorst shares his insights on the newly emerging field of big data analytics in Big Data Analytics. This breakthrough book demonstrates the importance of analytics, defines the processes, highlights the tangible and intangible values and discusses how you can turn a business liability into actionable material that can be used to redefine markets, improve profits and identify new business opportunities.

Reveals big data analytics as the next wave for businesses looking for competitive advantage
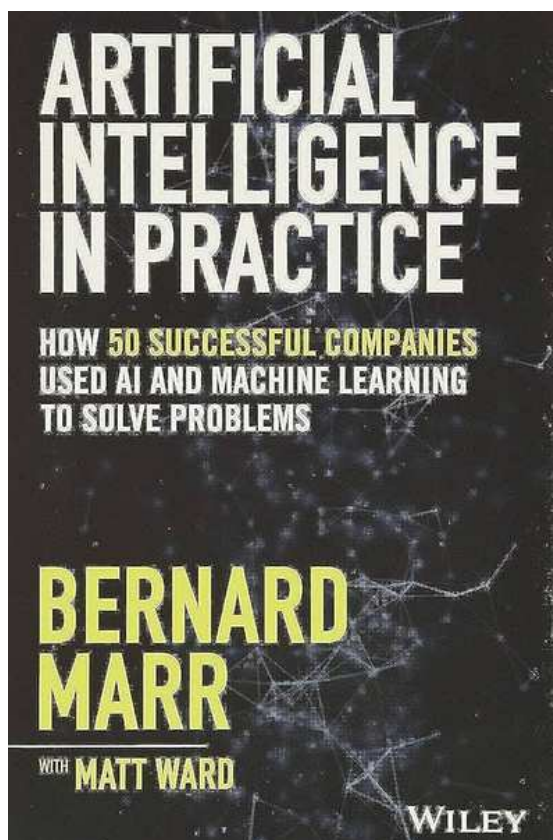
Takes an in-depth look at the financial value of big data analytics

Offers tools and best practices for working with big data

Source :Amazon
Ohlhorst, Frank (2013) *Big data analytics: Turning big data into big money*. Hoboken, John Wiley & Sons.

Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems

Artificial Intelligence in Practice is a fascinating look into how companies use AI and machine learning to solve problems. Presenting 50 case studies of actual situations, this book demonstrates practical applications to issues faced by businesses around the globe. The rapidly evolving field of artificial intelligence has expanded beyond research labs and computer science departments and made its way into the mainstream business environment. Artificial intelligence and machine learning are cited as the most important modern business trends to drive success. It is used in areas ranging from banking and finance to social media and marketing. This engaging and topical book explores a wide range of cases illustrating how businesses use AI to boost performance, drive efficiency, analyse market preferences and many others.

Source :Amazon
Marr, Bernard (2019) *Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems*. UK, Wiley.

Optimization for Machine Learning

An up-to-date account of the interplay between optimization and machine learning, accessible to students and researchers in both communities. The interplay between optimization and machine learning is one of the most important developments in modern computational science. Optimization formulations and methods are proving to be vital in designing algorithms to extract essential knowledge from huge volumes of data. Machine learning, however, is not simply a consumer of optimization technology but a rapidly evolving field that is itself generating new optimization ideas. This book captures the state of the art of the interaction between optimization and machine learning in a way that is accessible to researchers in both fields.

Source :Amazon
Sra, Suvrit (2012) *Optimization for Machine Learning,* Delhi, MIT Press.
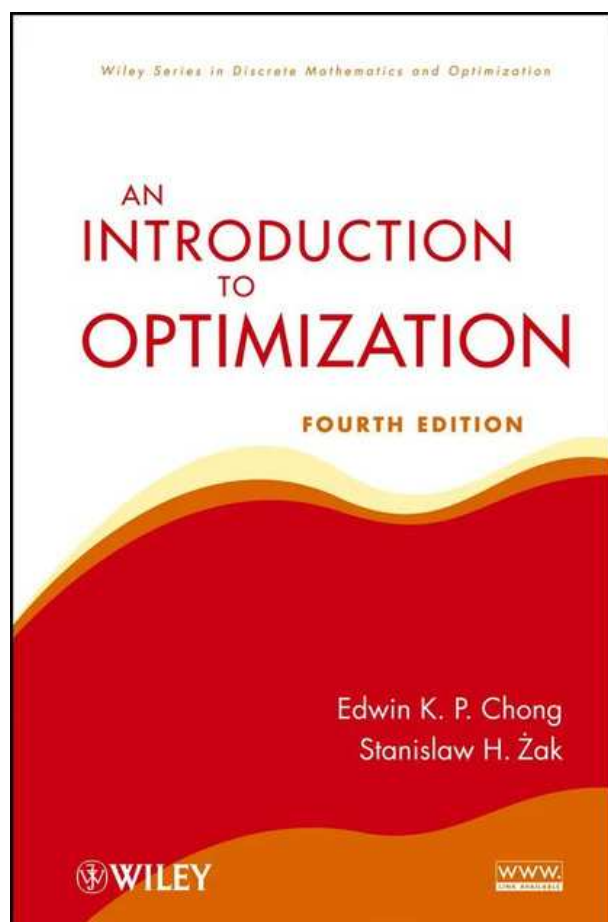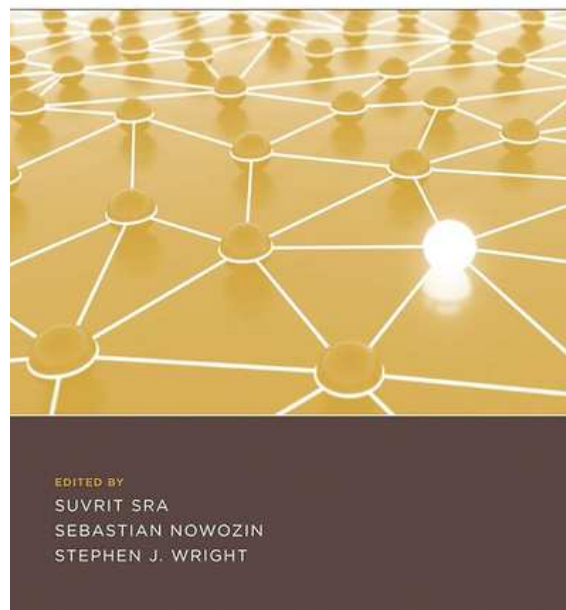
An Introduction to Optimization

Fully updated to reflect new developments in the field, the Fourth Edition of Introduction to Optimization fills the need for accessible treatment of optimization theory and methods with an emphasis on engineering design. Basic definitions and notations are provided in addition to the related fundamental background for linear algebra, geometry, and calculus.   This new edition explores the essential topics of unconstrained optimization problems, linear programming problems, and nonlinear constrained optimization. The authors also present an optimization perspective on global search methods and include discussions on genetic algorithms, particle swarm optimization, and the simulated annealing algorithm

Source :Amazon
Chong, Edwin K. P(2017) *An Introduction to Optimization.* New Delhi, Wiley.

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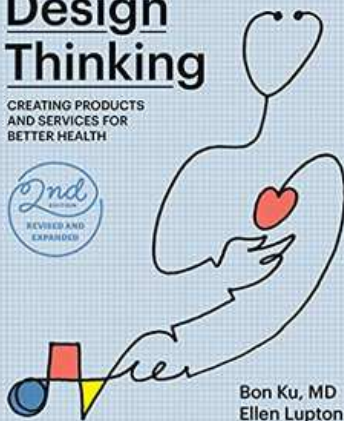Curating a responsible digital world

MASTERING CLOUD COMPUTING
Rajkumar Buyya
Christian Vecchiola
S.Thamarai Selvi

Health Design Thinking
CREATING PRODUCTS AND SERVICES FOR BETTER HEALTH
2nd EDITION REVISED AND EXPANDED
Bon Ku, MD
Ellen Lupton

O'REILLY
Explainable AI for Practitioners
Designing and Implementing Explainable ML Solutions
Michael Munn & David Pitman
Foreword by Ankur Taly

Make to Know
From spaces of uncertainty to creative discovery
Lorne M. Buchman

Check the OPAC of Knowledge Centre for new additions and their availability at

http://libcat.duk.ac.in:8081/

NETWORK FORENSICS
Privacy and Security
Anchit Bijalwan
CRC Press
A CHAPMAN & HALL BOOK

PROPOSAL WRITING 6
Effective Grantsmanship for Funding
Soraya M. Coley
Cynthia A. Scheinberg
Yulia A. Levites Strekalova

EARL BABBIE · WILLIAM E. WAGNER, III · JEANNE ZAINO
Adventures in SOCIAL RESEARCH
EDITION 11
DATA ANALYSIS USING IBM SPSS STATISTICS

TONY MORGAN · LENA J. JASPERSEN
DESIGN THINKING FOR STUDENT PROJECTS

Knowledge Centre/ Library Resources

Databases

- **IEEE Xplore (ASPP+POP All) - Online**
  https://ieeexplore.ieee.org/Xplore/home.jsp

- **Wiley Online Library**
  https://onlinelibrary.wiley.com/

- **Springer Nature**
  https://link.springer.com/

- **ACM Digital Library**
  https://dl.acm.org/

- **Science Direct (Comp. Sc. & Mgmt)**
  https://www.sciencedirect.com/

- **DELNET**
  https://discovery1.delnet.in/Search/Home

Library WebOPAC

http://libcat.duk.ac.in:8081/

KNimbus Digital Library

https://duklibrary.knimbus.com/user#/home

Other Services

- **Web of Science**
  https://www.webofscience.com/

- **Scopus**
  https://www.scopus.com/

- **SciVal**
  https://www.scival.com/

- **Overleaf**
  https://www.overleaf.com/

- **Turnitin - Plagiarism checker**
  https://www.turnitin.com/

- **Grammarly**
  https://app.grammarly.com/

- **Edzter**
  https://www.edzter.com/login

- **Canva**
  https://www.canva.com/

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