

Abrar Syed

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EDUCATION

Master of Science, Computer Science

Expected : June 2024

University of California, Davis, CA | **CGPA: 3.71/4.0**

Relevant Coursework: Design and Analysis of Algorithms, Machine Learning (ML), Big Data, Software Engineering

Bachelor of Technology, Computer Science

July 2018 - May 2022

SRM University-AP, Andhra Pradesh, India | **CGPA: 9.03/10**

Relevant Coursework: Data Structures and Algorithms (C++), Object Oriented Programming (Java), Probability and Statistics

Organizations/Awards: IEEE Student Branch, First Class with Distinction(Top ~ 10%), Semester Abroad Program Scholarship(\$19,900)

Visiting Student (Semester Abroad Program)

Jan 2020 - May 2020

University of California, Berkeley, CA | **CGPA: 3.80/4.00**

Relevant Coursework/Skills: Applied Data Science with Venture Applications (Data-X), Database Management Systems (DBMS),

Disruptive Technology and Social Impact Challenge Lab, Entrepreneurship

TECHNICAL SKILLS

Programming Languages: Python | C/C++ | Java | SQL | Flask | HTML | CSS | JavaScript | Solidity | MATLAB

Tools & Technologies: Docker | Linux | Git | MariaDB | NumPy | Pandas | Web3 | MetaMask | React.js | Node.js | Next.js | Semantic UI

Interests: Cloud Computing, AWS, DevOps, Blockchain, Web Development

PROJECTS

github.com/abrar-syed

Travel4All

- Collaborated as a key team member within a cross-functional team of 5 to successfully develop a route recommendation system for budget-conscious travelers, applying a data-driven approach to streamline travel choices, enhance user convenience, and reduce costs.
- Leveraged **Amadeus** and **Google Maps APIs** to extract flight data from over 400+ airlines and driving routes respectively, allowing for the calculation of comprehensive trip costs with an accuracy rate of 95% or higher.
- Contributed to the design and development of the web application using **Flask**, **HTML**, **CSS** and **JavaScript** enabling users to input travel preferences, budget constraints, and trip logistics, resulting in a cost-effective travel recommendation system with interactive map displays for enhanced user experience.

Environmental Justice Mapping

- Developed **Flask**-based web application that maps and analyzes data on California's Cap and Trade program and GGRF funding, emphasizing environmental justice impacts over 8057 census tracts and 58 counties.
- Utilized **Docker** containers and **MariaDB** for efficient deployment and management, reducing application response time by 40% and enhancing application performance.
- Applied advanced techniques, such as normalization by using **SQL** queries, to analyze an extensive dataset with 8000+ records resulting in a 25% improvement in data retrieval efficiency.

CrowdCoin

- Implemented an innovative blockchain-based solution that addresses the limitations of traditional crowdfunding platforms by establishing a direct peer-to-peer connection between project creators and backers aiming to enhance user experience and potentially increase campaign success rates.
- Contributed to the development and deployment of **Ethereum** smart contracts using **Solidity** and **Node.js** on the back-end, ensuring transparency and reliability in financial transactions.
- Leveraged **Web3**, **MetaMask**, **React**, **Semantic UI**, and **Next.js** to create a user-friendly front-end interface, with the goal of optimizing user engagement and facilitating seamless interactions.

Other Projects: Large Language Models (LLM) as Polling Participants in Qualitative Research, Predicting Next Day rain in Australia using ML techniques, Intrusion Detection using ML techniques

CERTIFICATIONS

- AWS Knowledge: Cloud Essentials Issued by Amazon Web Services (AWS) Training and Certification (2024)
- IBM Blockchain Essentials V2 Issued by IBM (2020)

HACKATHONS & CONFERENCES

- Attended **SF DeveloperWeek Hackathon** with over 2000+ attendees. Built **FUSION**, which automated DSLR camera tasks using Canon PowerShot camera with **Canon Camera Control API**. (2020)
- Attended **Google Developer Group(GDG) DevFest** with over 1000+ attendees organized by GDG Hyderabad. (2019)

RESEARCH EXPERIENCE

SRM University-AP, Andhra Pradesh, India

Jan 2021 - May 2022

Undergraduate Researcher

- Collaborated with a team of 3 members under my advisor on the "Reversible Data Hiding Scheme" (RDH) project for enhancing medical image security and integrity in the Internet of Medical Things (IoMT).
- Conducted a literature review of 7+ papers identifying challenges in existing techniques that led to the proposal of an innovative RDH scheme.
- Played a vital role in developing the model using **MATLAB**, achieving an average imperceptibility of 37dB for various test medical images and an accuracy of ~ 99% in recovering the images upon tampering.

TEACHING EXPERIENCE

University of California, Davis

Sept 2022 - Present

Graduate Teaching Assistant

- Actively participated in weekly in-class meetings of about 25-30 students, fostering an interactive and inclusive learning environment.
- Led weekly office hours assisting students with coding challenges, debugging issues and project development in **HTML**, **CSS** and **JavaScript**.
- Assisted in grading and offering constructive feedback on a variety of web development projects. Involved evaluating the effectiveness of HTML/CSS layouts and JavaScript functions, ensuring adherence to best coding practices and industry standards.