

Mahad Mubashir Beg

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EDUCATION

Lahore University of Management Sciences (LUMS) - **BSc. Computer Science** CGPA: 3.13 Sept 2019 – May 2023

Coursework: Data Structures, Algorithms, Operating Systems, Artificial Intelligence, Network Centric Computing, Software Engineering, Databases, Data Science, Data Mining, Block Chain Technology, Computer Organization and Assembly Language

• Lahore Grammar School - **GCSE A Levels:** 2A 1B | **GCSE O Levels:** 2A* 6A | **SAT:** 1460 Sept 2014 – May 2019

PROFESSIONAL EXPERIENCE

Full Stack Engineer, *Senarios PVT Ltd, Lahore, Pakistan* Sept 2023 – PRESENT

- Proficient in developing robust APIs on the backend for **Android and web applications** utilizing **Node.js**, ensuring seamless communication between frontend and backend systems.
- Experienced in orchestrating **code pipelines** and configuring databases using various **AWS services**, ensuring high availability, scalability, and security of applications.
- Spearheading the formulation of **project proposals** and delineating **system and design requisites** for cutting-edge **Web3 applications**, staying abreast of emerging technologies and industry trends.
- Facilitating **SCRUM meetings** and fostering collaboration among **cross-functional teams** to streamline project workflows, prioritize tasks, and achieve timely delivery of **project milestones**, ensuring alignment with business objectives.
- **Led client meetings** to gather requirements and crafted project proposals. Defined specifications, milestones, and provided accurate cost estimations, resulting in the acquisition of **3 new clients** and a **25% increase in project approval rates**.

Junior Software Developer, *Embedded Processing Limited, Lahore, Pakistan* Aug 2022 – Aug 2023

- Implemented **WI-SUN communication protocol** integration into **Smart Meters' embedded C** codebase, concurrently conducting rigorous **unit testing** through **hardware flash programming**.
- Elevated user experience by enhancing **front-end design** with **Vue JS**, while concurrently enhancing backend functionality to introduce dynamic features, resulting in substantial efficiency gains.
- Resolved intricate bugs within the embedded codebase of a **portable dialysis machine** in **C and C++**, ensuring robust performance and safety standards. Conducted comprehensive testing utilizing **VectorCAST** to validate code integrity and reliability.

Software Development Intern, *Suave Solutions, Lahore, Pakistan* June 2022 – July 2022

- Designed **front-end** of a **web application** using **HTML/CSS** and ensured consistency across **20+** web pages.

Market Research Intern, *SB&B Marketing Research, Lahore, Pakistan* Jan 2020 – Aug 2020

- Assisted the Senior Strategist on **Auto-car surveys** by conducting **200+ face to face interviews** with car owners in customer satisfaction surveys, brand image/health surveys, new product development, Pricing and post launch surveys.

Research Intern, *Honda Atlas Cars Pakistan Ltd., Lahore, Pakistan* Aug 2018 – Sept 2018

- Performed **Data collection & analysis** for a marketing research project on **Automobile Features Preference & VfM**.

PROJECTS

Somos Blockchain, Crypto Wallet Android Application, *Senarios* Jan 2024 – PRESENT

- **Engineered backend infrastructure** for a crypto wallet using **web3.js**, facilitating **850 transactions per day** with secure and scalable solutions.
- **Analyzed and optimized transaction costs** across test networks, reducing costs by **20%** and enhancing operational efficiency.
- **Coded and deployed smart contracts** on Ethereum using **Solidity**, ensuring reliable and secure transactions.
- **Implemented robust security measures**, utilizing hashing and encryption to safeguard user data and prevent **100% of data breaches**.

- **Used Trello for task coordination** and conducted daily SCRUM meetings, ensuring timely milestone delivery, reducing project completion time by **25%**, and saving **\$10,000 in resource costs**.
- **Integrated MoonPay payment gateway** using **NodeJS SDK**, handling **\$5,000+ in transactions monthly**.
- Employed **DNS configuration techniques** to establish a reliable connection between the **GoDaddy domain** and the **AWS-hosted application**, ensuring seamless access, leading to **1,500 webpage visits per month**.
- Integrated **PayPal payment gateway** using **PayPal RESTful APIs** to allow users to make payments for **subscription plans**, facilitating over **242 subscription payments monthly**. Also set up **webhook and event handling**, ensuring real-time updates with **100% accuracy**.

Inflo, Android Application, *Senarios*

Sept 2023 – PRESENT

- **Designed and managed Inflo's database schema**, ensuring **efficiency** and **scalability**. Utilized **Prisma ORM** for seamless schema migrations, enabling **agile development** and improving database performance by handling **1,000 additional queries per second**.
- **Developed robust APIs**, enabling key functionalities and integrating third-party services like **Twilio**, **SendGrid**, and **Firebase** for an enhanced **user experience**, supporting over **5,000 active users**.
- **Set up and managed databases on AWS RDS**, optimizing performance and scalability for Inflo's backend, resulting in a reduction of query response time by **200 milliseconds**.
- **Hosted the application on AWS EC2 instances** for reliability and performance, ensuring **99.95% uptime**.
- Established a **CI/CD pipeline** using **AWS CodeBuild** and **EBS**, automating build, test, and deployment processes, ensuring efficient delivery of updates, reducing deployment time from **1 hr to 4 mins**.
- Integrated **Firebase Admin SDK** for **real-time notifications**, attracting **300 daily active users** and generating **1,500 interactions per week**.

Baichday Pakistan, Consumer-to-Consumer Web Application, *LUMS*

Sept 2022 – April 2023

- Led a team of 4 members, developing critical features of a **MERN Stack** web application, including authentication, database integration, system design, UI/UX design, and deployment, ensuring a comprehensive and efficient **full-stack solution**.
- Designed intuitive user interfaces using **Figma**, leveraging user experience best practices and responsive design principles to improve usability and accessibility, leading to **500 new user sign-ups** within the first month.
- Executed automated testing procedures using **Cypress JS**, implementing robust test cases to validate functionality, enhance code quality, and expedite debugging, reducing **bug resolution** time by **70%**.
- Integrated **Stripe payment gateway** to enable users to credit their wallets, facilitating over **1,000 transactions per month**. Set up **webhook** and event handling to ensure real-time synchronization with **99.9% uptime**.

Image Recognition System, *LUMS*

Spring 2021

- Engineered an image recognition system by developing a custom AI model utilizing **neural network architecture**.
- Implemented the model training process using Python, employing **back propagation** techniques to **optimize model parameters** and enhance accuracy.
- Achieved an impressive **97% accuracy** rate through meticulous training and fine-tuning of the neural network, demonstrating exceptional proficiency in machine learning and algorithm development.

RESEARCH PUBLICATIONS

M. Mubashir, Z. Afzal, and R. Rafay, "PoW to PoS Transition: Early Lessons from Ethereum's Merge" [Submitted] *5th IEEE International Conference on Blockchain*, 2023.

COMMUNITY LEADERSHIP AND VOLUNTEER WORK

Marketing Intern, *Akhuwat, Lahore, Pakistan*
2018

June 2018 – July

- Fundraised and led **40+** volunteers in a campaign distributing free clothes to **200+** financially disadvantaged families.
- Organized the 2nd **Islamic Microfinance** Round Table Conference, hosting **50+** participants from multiple organizations.

HONORS AND AWARDS

- Placed on **Deans Honor list** in Spring 2020 and Fall 2022

- **100% Merit** Scholarship in A' Levels
- Awarded LUMS Football team **Color & Top Goal Scorer** for **2021-22** and **2022-23** seasons
- LUMS Cricket Team **Highest Runs Scorer** award with **6 half centuries** and **2 centuries** for the season 2022-23

SKILLS

Skills: C, C++, Python, Pytorch, TensorFLow, Numpy, Node JS, Vue JS, React, MySQL, Haskell, Visual Basic, HTML/CSS, Solidity

Software Tools: VS Code, Mongo DB, Github, Postman, Jupyter, Eclipse, Adobe Creative Suite, Figma, Stata, Excel, Octoparse