

Shuaib Ahmed

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EDUCATION

University of California, Davis
B.S. in Computer Science (GPA: 3.94)

Davis, CA

Expected Graduation: June 2025

- Relevant Coursework: Programming & Problem Solving, Data Structures & Algorithms, Discrete Math, Linear Algebra

PROFESSIONAL EXPERIENCE

Research Assistant @ UC Davis (PI: [Dr. Zubair Shafiq](#))

June 2023 - Present

- Research in applications of adversarial machine learning and generative models for web security and internet privacy.
- **Project 1:** Performing the first large-scale study investigating sophisticated bot detection evasion against commercial anti-bot services. Developed diverse datasets from various services to uncover evasion techniques and utilizing FGSM on deep learning models to produce methods for more accurate bot detection. **[Submitting at USENIX 2024]**
- **Project 2:** Developing an innovative technique for device fingerprinting, approach entails examining the distinctive patterns on processors induced by the power viruses to generate unique fingerprints for individual devices.

Software Engineering Intern @ [Volt](#)

Sept. 2023 – Present

- Collaborating on a cross-disciplinary team of 10 to create an application displaying cost statistics and revenue data.
- Utilized cutting-edge technologies to implement a backend powered by a FastAPI server in Python and PostgreSQL managing over 2000 data entries, and a React frontend application with JavaScript
- Oversaw the creation of API endpoints for functions such as returning dashboard data, specific customer data, and report generation, displaying over 1500 entries of company statistics
- **Technologies:** React.js (Vite), Python, FastAPI, PostgreSQL, AWS Lambda, Javascript, Jira, Notion

Co-founder/Lead Developer @ TimeSync - Scheduling App ([GitHub](#): [TimeSync](#))

Apr. 2023- Oct 2023

- Led a team of 2 software engineers to develop a full stack application with daily development meetings
- Released application as beta, providing scheduling services to 23 users across 5 organizations
- Implemented advanced optimizations, including event descriptions, customizability, server optimization processes that increased API endpoint communication speed and data transfer speed to the database by 25%
- Accepted into StartUpDevKit 3-month accelerator program
- **Technologies:** React.js, Python, Flask, MySQL, Heroku, Netlify, ClearDB

PROJECTS

Vivid - Community Image Generation Application ([GitHub](#): [Vivid](#) | [App](#) : [Vividbeta](#))

June 2023 - July 2023

- Developed a MERN web application, that efficiently converts user descriptions into images using DALL-E API
- Integrated Cloudinary API to manage and showcase user-generated images fostering community engagement
- Ensured data persistence and retrieval through MongoDB database currently storing information on 20+ users & 35+ posts
- Provided responsive user support, achieving a 95% user satisfaction rate by addressing feedback and issues promptly
- **Technologies:** MongoDB, Express.js, React.js, Node.js, Netlify, OpenAI API, Cloudinary API

SQL Query Generator - Natural Language to SQL converter ([GitHub](#): [SQL-Query-Generator](#))

May 2023

- Utilizes OpenAI's daVinci model to convert inputs into sql queries that can be used for large database management
- Improved application complexity with also including gpt-turbo-3.5 model increasing application performance by 15%
- Provided users with customizable query parameters, enhancing versatility and drastically cutting average query development times by almost 50%, especially when dealing with large databases and query insertions/extractions
- **Technologies:** React.js, HTML, CSS, Node.js, Express.js, OpenAI API

RMP Extension - Schedule Builder Extension for UC Davis students ([GitHub](#): [RMP-Extension](#))

April 2023

- Led group of 3 engineers to design and develop a streamlined chrome extension which allows UC Davis students to view professor ratings, according to third party platform used for professor ratings
- Enhanced the extension's performance speed by over 15% through the implementation of efficient caching mechanisms, resulting in a significant improvement in program speed and increasing backend storage capacity to about 4,300 data points
- **Technologies:** Python, Javascript, HTML, Pandas Dataframes, API & cache implementation

AI Chat App - Messaging Platform with AI Integration ([GitHub](#): [AI-Chat-App](#))

March 2023 - April 2023

- Developed a full stack app for seamless user to user messaging and AI-enhanced conversations via OpenAI's ChatGPT
- Implemented ChatEngine for real-time communication, supporting 11 concurrent users without delays
- Optimized application with Redux Toolkit, reducing load times by 40% and ensuring smooth user experiences.
- Received positive feedback from more than 13 users who thoroughly tested and extensively utilized the application.
- **Technologies:** ChatEngine, Redux Toolkit, RTK Query, Node.js, Express.js, OpenAI API

SKILLS / INTEREST

Languages: C/C++, Python, JavaScript, HTML, React.js,, Node.js, Linux/Unix, Java, Angular

Technologies: MySQL, Flask, PostgreSQL, Netlify, Heroku, MongoDB, Tensorflow, Numpy, API Management, REST API, Git, NoSQL, Microsoft Offices, Golang, Jira