

Shuaib Ahmed

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EDUCATION

University of California, Davis
B.S. in Computer Science (GPA: 4.0)

Davis, CA

Expected Graduation: June 2025

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

WORK EXPERIENCE

- Undergraduate Research Assistant @ UC Davis (PI: [Dr. Zubair Shafiq](#))** **June 2023 - Ongoing**
- Research in using parallel web-scraping and ML in order to extract web ads and create an ad observatory for the entire web
 - I perform extensive web-based internet measurements to investigate and enhance web dynamics.
 - Utilizing filter listing requests and image matching to simultaneously extract web ads from multiple sites.
 - My optimization approach added a heuristic condition to filter for image and video request types, resulting in an 80% reduction in false positives.
 - Verified the technique on over 15 websites, achieving accurate extraction of ads from over 90% of the platforms.
- Lead Instructor @ Mathnasium Inc.** **Jan. 2022 – Feb. 2023**
- Developed learning plans for ~1,300 students at different learning levels to foster an efficient learning journey
 - Tutored over 60 students in math ranging from addition to Integral Calculus.
 - Communicated expectations and progress of students with parents/guardians on a regular basis

PROJECTS / EXPERIENCE

- TimeSync (Co-Founder & CEO) - Scheduling Platform ([GitHub w/ Demo: /TimeSync](#) | [App : timesyncbeta](#))** **Apr. 23' - Pres.**
- Led a team of 2 software engineers to develop a full stack application with daily development meetings
 - Released application as beta, currently 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%
 - Created a seamless user experience with a responsive ReactJS interface, a reliable Python-Flask backend for data processing, and a secure MySQL database for effective task management.
 - Accepted into StartUpDevKit 3-month accelerator program
 - **Technologies:** React.js, Python, Flask, MySQL, Heroku, Netlify, ClearDB
- Vivid - Community Image Generation Application ([GitHub: /Vivid](#) | [App : Vividbeta](#))** **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](#))** **June 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:** ChatEngine, Redux Toolkit, RTK Query, Node.js, Express.js, OpenAI API
- RMP Extension - Schedule Builder Extension for UC Davis students ([GitHub: /RMP-Extension](#))** **May 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
- Weather Predictor - Prediction Model using Custom Linear Regression ([GitHub: /Weather-Predictor](#))** **June 2023**
- Engineered a custom linear regression algorithm with Gradient Descent optimization from scratch to forecast weather parameters based on historical data gathered from Kaggle
 - Predictions showed high correlation with historical data as a R-squared value of .7 was achieved, closely mirroring sklearn's linear regression model performance as the variable values were within .1 of sklearn's model
 - **Technologies:** Python, Pandas Dataframes, Numpy, Matplotlib, Sklearn

SKILLS / INTEREST

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

Technologies: MySQL, Flask, PostgreSQL, Data Structures/Algorithms, Netlify, Heroku, MongoDB, Tensorflow, Numpy, API Management, REST API, Git, NoSQL