

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 - Present

- 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

TimeSync (Co-Founder/Lead Developer) - Scheduling App ([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](#))

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:** ChatEngine, Redux Toolkit, RTK Query, 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

Heart Disease Classifier - Custom Logistic Regression Model ([GitHub: /HD-Classififer](#))

June 2023

- Implemented a logistic regression model to predict the presence of heart disease based on the Heart Disease UCI dataset
- Leveraged 14 diverse patient health features to curate comprehensive training/testing datasets, optimizing inputs utilized
- Demonstrated the effectiveness of the logistic regression model by achieving an accuracy of 0.81 on the training dataset.
- Engineered an input system enabling users to customize input features and obtain predictions based on custom inputs
- **Technologies:** Python, Pandas Dataframes, Numpy, 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