

VATSAL SHAH

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EDUCATION

University of Michigan Ann Arbor || Ann Arbor, MI

August 2024 – May 2027

B.S. Computer Science LSA Honors

Relevant Coursework: Software Engineering, Control Flow, Object-Oriented Programming, Discrete Mathematics, Statistics & Probability

Raffles World Academy || Dubai, United Arab Emirates

International Baccalaureate Diploma

IB: 44/45, SAT: 1530

Relevant Coursework: Computer Vision, Computer Architecture, Machine Learning, Data Structures & Algorithms, App Development, Differential Equations & Linear Algebra, Vectors & Geometry, NLP

WORK EXPERIENCE

ThirdEar AI: *Software Development Intern*

05/2024 – present

- Developed user-friendly UI/UX designs for ThirdEar AI's website using Figma, collaborating with a team of seven to align interface design with company objectives and user needs.
- Engineered on-device AI processing to enhance user privacy by analyzing partial transcripts locally, ensuring sensitive conversations remained secure.
- Played a critical role in enhancing the iOS application by identifying and resolving bugs as an early beta tester, and led the development of a targeted social media campaign strategy that increased engagement by 20% and expanded the company's online presence.

Geomnii: *Software Engineering Intern*

06/2022 – 07/2023

- Developed and launched a feature-rich e-commerce app showcasing diverse brands and products, driving over 9,000 sales within the first quarter.
- Engineered a robust backend inventory system using SQL databases and integrating with SAP Warehouse Management, enabling real-time inventory tracking and seamless workflow optimization for founders.
- Implemented a just-in-time inventory model, significantly boosting operational efficiency and reducing excess stock by 35%, leading to improved cost management and resource allocation.

RESEARCH & PROJECTS EXPERIENCE

University of Cambridge, Computer Science Department: *Research Assistant*

03/2023 – 10/2023

- Led a project investigating biases in object detection for autonomous vehicles using OpenCV for image masking and YOLOv8 for segmentation. Developed 1,500+ images to assess algorithm performance.
- Published in the National High School Journal of Science, revealing significant biases in detection models. Created three datasets with different degrees of image modifications, providing a versatile testing platform for improving algorithm robustness.

Wolfram Summer School: *Undergraduate Researcher*

06/2023 – 07/2023

- Researched under Dr. Daniel George (PhD, UIUC; ex-Google X, ex-JPMorgan AI Lead) as the youngest researcher, navigating alongside undergraduates and professors. Developed predictive models using GPT-2 and BERT embeddings with Wolfram Language to analyze 600 news articles & 50 stock tickers.
- Published in the Wolfram Summer Proceedings for pioneering research that integrated language models with financial news data, improving stock market prediction accuracy as demonstrated by ROC analysis.

SKILLS

- C++, Python, Ruby, HTML, JavaScript, CSS, SQL, PHP, Wolfram Language
- Backend Database, iOS/Android App Development, React & Flask, Android Studio, Node.js, MySQL, Git, LaTeX, Google Colab