

Rohit Shete

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EDUCATION

University of Maryland

College Park, MD

BS in Computer Engineering - 3.7/4.0

December 2025

Relevant Coursework: Object Oriented Programming, Algorithms & Data structures, Signal Processing, Embedded Systems, Computer Systems, Discrete Structures, Computer Organization, Digital Logic Design, Circuits, Compilers, Operating Systems, Machine Learning

EXPERIENCE

Undergraduate Researcher

December 2024 – Present

University of Maryland

College Park, MD

- Developed a **Python-based GUI** to streamline visualization of pose transitions and speed up text input by **90%**
- Generated pose bounding boxes leveraging **MMPose**, creating data for pose transition annotation
- Currently working on compiling and analyzing sport pose data

Software Engineering Intern

June 2025 – August 2025

Amazon

Bellevue, WA

- Developed a responsive chatbot frontend using **React** for an internal service utilized by over **300 users**
- Built core functionalities, including real-time message streaming and conversation management
- Implemented engagement features, such as like/dislike feedback and message deletion, improving usability and data collection for analysis
- Wrote unit tests with **Jest/React Testing Library** to ensure reliable feature delivery

Software Engineering Intern

May 2024 – August 2024

John Hancock

Boston, MA

- Designed a streamlined **Docker container image** for NGINX, and enhanced the existing Node image for future scalability
- Optimized companies base container image library by reducing the number of needed files by over **50%**
- Utilized **GitHub actions** to automate the deployment of over 10 images, **freeing 20 hours/month** of engineer's time, and ensuring the latest versions are deployed through **CI/CD**
- Updated **Kubernetes** pods to resolve 5 security compliance complaints identified in Prisma

PUBLICATIONS

AutoComPose: Automatic Generation of Pose Transition Descriptions for Composed Pose Retrieval Using Multimodal LLMs. Yi-Ting Shen, Sungmin Eum, Doheon Lee, **Rohit Shete**, Chiao-Yi Wang, Heesung Kwon, Shuvra S. Bhattacharyya.

PROJECTS

LLVM Inliner

May 2025

- Implemented a function inlining optimizing pass using **LLVM**
- Analyzed function call to ensure constant arguments, replaced formal arguments with actual values
- Cloned and remapped IR instructions using ValueToValueMapTy, handling return cases (void, constant, variable) to ensure correctness

BCD Counter Controlled by 8051

March 2025

- Designed a 16-bit BCD up/down counter on an **Intel 8051 microcontroller**, interfacing with a 4-digit 7-segment display on the **Basys 3 board**
- Programmed the 8051 to handle real-time counting logic, including ripple increment/decrement across digits and input-based direction control via mapped buttons
- Verified correctness via simulation and waveform analysis as well as implementing multiplexing logic for display

TECHNICAL SKILLS

Languages: Java, Python, C, OCaml, Rust, TypeScript, HTML/CSS, Unix

Technical: Docker, Kubernetes MATLAB, LaTeX, Git

Libraries: pandas, NumPy, Matplotlib, scikit-learn, regex