Anurag Bangera

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Education:

University of Michigan: Rackham Graduate School August 2023 - May 2024
M.S.E Computer Science and Engineering Ann Arbor, MI

- Coursework: Distributed Systems, Advanced Compilers, HCI

University of Michigan: College of Engineering August 2020 - May 2023
B.S.E Computer Science: Magna Cum Laude (GPA: 3.72/4.0) Ann Arbor, MI

- Coursework: Operating Systems, Applied GPU programming, Data structures, Web systems, Intro to AI, Compilers, Intro Autonomous Robotics, Linear Algebra, Discrete Math

Experience:

Michigan Medicine - *Ann Arbor, MI* July 2023 - Present
Student Software Developer

- Creating 25+ medical knowledge API implementations within the Knowledge Grid infrastructure system
- Developed and tested an activator for medical knowledge, enabling **Python** development workflows for clients and reducing knowledge package sizes by over 25%
- Deployed command line batch, **Typescript** and **Python** web services, and command line interfaces for various knowledge objects

Shibumi (shibumi.com) - *Royal Oak, MI* May 2022 - August 2022
Software Engineering Intern

- Rewrote and optimized an entire service, upgrading from Java to **Node.js** and **Typescript,** resulting in a 50% reduction in processing time and memory usage
- Created a full-stack application to allow 15+ large clients to enable SSO capabilities with a simple UI, implemented with a **ReactJS** interface and a **Java** Spring Boot server-side implementation
- Updated the current SSO microservice to communicate through a Redis server, and to generate and refactor 100+ SAML setup files in **AWS S3**
- Expanded a testing suite using Jest to 90% coverage on multiple microservices, resulting in 5+ successful releases to the production **Kubernetes** cluster

Yazaki North America - *Canton, MI* January 2022 - December 2022
University of Michigan MDP Student Project Team

- Acted as project manager to lead 20+ meetings with stakeholders to establish goals, scope, and requirements for designing, building, and testing an adaptive system to test wire harnesses
- Built and programmed a distributed microcontroller sensing network using **Raspberry PI** and **ESP32**s communicating over a CAN bus with 10+ nodes
- Developed a web UI using **React** and **Python**, displaying harness status with <2s latency from input to interface
- Reduced errors in final harness by 30% and harness testing time by 90% in mock trials compared to older processes

Projects:

Cloud Storage Optimized Two-Phase Commit

- Optimized a state-of-the-art distributed atomic commit protocol based on the Cornus paper
- Created and deployed a distributed network of C++ HTTP clients to coordinate concurrent transactions with any underlying datastore

Skills

C++ | C | Javascript | Python | REACT | SQL | Java - Spring | Matlab | Git | AWS | Typescript | CUDA | Deno