Ashwath Krishnan

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Education

University of Illinois Urbana Champaign — Expected Graduation: May 2025
Master of Computer Science — GPA: 4.0/4.0
Courses: *Software Engineering, ML+Data Systems, Artificial Intelligence, Database Systems*

PES University — Aug. 2019 – July 2023
Bachelor of Technology in Computer Science and Engineering — GPA: 3.8/4.0
Courses: *Data Structures, Operating Systems, Object Oriented Programming, Cloud Computing*

Technical Skills

Languages: Python, Java, C, C++, SQL, HTML/CSS, JavaScript, Swift
Frameworks: React.js, Node.js, Express.js, Flask, FastAPI, Apache Spark, Spring Boot, TensorFlow, PyTorch, RAG
DevOps & Tools: Docker, Kubernetes, Unix, Git, REST API, Linux, Figma, Terraform, Ansible, Agile, Jira, Confluence
Cloud and Databases: Microsoft Azure, Amazon Web Services, GCP, dbt, MongoDB, NoSQL, Neo4J, MySQL, Postgres

Experience

University of Illinois Urbana Champaign — Feb 2024 – Present
Software Engineer, iOS — Urbana, IL

- Designed a conversational app in **SwiftUI** for blind users, improving exercise tracking and user engagement by **66%**
- Integrated Apple HealthKit with **GPT** and **Whisper APIs** for personalized speech-based health recommendations
- Containerized the FastAPI backend using Docker, pushed the image to Docker Hub, and deployed it through **Azure Cloud**, streamlining deployment and achieving a **57%** improvement in app performance through Azure CosmosDB

Zebra Technologies - Motorola — Jan 2023 – July 2023
Software Development Intern — Bangalore, India

- Spearheaded and deployed a device tracking portal with **ReactJS** and **Firebase**, implementing **8** Firebase cloud functions to help Walmart warehouse managers monitor Zebra devices, enhancing operational efficiency by **12.5%**
- Executed **10+** optimized SQL queries in BigQuery, streamlining data retrieval and analysis for device management.
- Improved software reliability with **500+** Jest test cases, boosting code coverage by **18%**, and pioneered a proof of concept with jest-stare for clear visualization of unit tests

Soroco — June 2022 – July 2022
Software Engineer Intern — Bangalore, India

- Optimized workflows for the Data Pipeline team with **Apache Air ow**, integrating Great Expectations into Azure Pipelines with **130+ SQL** expectations to automate data quality checks, reducing data validation issues by **22%**
- Strengthened CI/CD by embedding the expectation suite into Azure Release pipelines for consistent data quality
- Enhanced pipeline reliability with **Datadog**, monitoring data health every **12 hours** for early issue detection.

Projects

Fitt | *ReactJS, Flask, OpenCV, MediaPipe*

- Created a Real-Time Gym Instructor, achieving a **36%** improvement in posture alignment during exercises such as push-ups, planks, and bicep curls
- Integrated MediaPipe to accurately detect **32** human joints, providing live dynamic feedback to users via **WebSockets**
- Leveraged **OpenCV** to analyze live data and deliver user-specific corrections, boosting safety and user retention by **70%**

Rume | *ReactJS, Node.js, Express.js, MongoDB Atlas, Docker*

- Engineered a full stack real-time chat application, to enhance student communication within university chat rooms
- Implemented **Passport.js**, a middleware for robust user authentication, ensuring security and data integrity
- Deployed **Socket.IO** to enable real-time messaging, reducing latency by **30%** and improving user experience
- Orchestrated a **microservices architecture** with Docker, segmenting user, rooms, and chat services to optimize end-to-end scalability and maintainability, while integrating **MongoDB Atlas** for efficient data storage and sub-millisecond retrieval

EnrollMints | *ReactJS, Flask, MySQL, Google Cloud Platform*

- Developed an enhanced course registration system for Computer Science degrees at UIUC, adding features like course and professor reviews, waitlists, prerequisites, and workload tracking
- Designed a ReactJS dashboard to display degree progress, credit requirements, and workload analysis, boosting academic planning efficiency and raising student satisfaction by **45%**
- Optimized MySQL with stored procedures, triggers, indexes and deployed on Google Cloud Platform, resulting in **23%** faster data retrieval