

Pranav Badhe

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EDUCATION

Master of Science, Computer Science

Aug 2022 – May 2024

Indiana University Bloomington, IN

GPA: 3.9/4.0

- Courses: Applied Machine Learning, High Performance Computing, Functional Programming

Bachelor of Engineering, Computer Engineering

Aug 2016 – Apr 2020

University of Pune, India

GPA: 3.7/4.0

WORK EXPERIENCE

Graduate Research Assistant | Indiana University, IN

Feb 2023 – Present

- Developed **Python library** for large-scale graph data processing yielding **27x speedup** against a popular library, PyG
- Optimized the library with 20+ multithreading experiments, achieving 10% faster benchmarks using **Linux HPC** cluster
- Paper accepted in **Top 16 ranked publication** - ACM TheWebConf, 2024 with three coauthors, link: lnkd.in/dbuCwWEB

Software Engineer | eQ Technologic

Dec 2020 – Jun 2022

- Engineered **distributed systems in Java** for enterprise apps over 2 product generations, implementing **100+ features** using test-driven development (TDD) in JUnit, design patterns, and **containerization on GCP** with strict peer reviews
- Refactored legacy Java APIs to **RESTful Spring webservices** & event-driven architecture, resulting in **35% performance boost**
- Appointed as **secondary lead** for flagship Business Intelligence product; **integrated business logic** with common data model, enabling seamless data transfer across 3+ applications in **SQL, NoSQL** and Graph database using JDBC & JMS messaging
- Resolved critical **SaaS deployment** issues by optimizing **CI/CD** pipelines, **Docker** and Kubernetes, **reducing downtime by 15%**

Software Development Intern | DeeDee Labs

Apr 2019 – Dec 2019

- Crafted interactive Unity games for amputees, reducing training time by 62% for adapting to their new prosthetic arm
- Managed development in an **early-stage startup** to process high frequency arm movement data with **MQTT** and **shell scripts**

PROJECTS

Open-Source: LLM Observability tool

- Enhanced ergonomics through rigorous code reviews for a full-stack app with Python backend having **2.5k+ GitHub stars**
- Contributed to **12 releases** of the product, and upgraded framework for an **observability** tutorial based on OpenTelemetry

Bioinformatics: Gene Regulation Analyzer

- National level [Award](#)-winning tool, to combine 3 complex sequencing processes in a single docker-based one-click solution
- Innovated a high-throughput software pipeline to parse large DNA datasets **reducing 40% execution time**
- Actively **used by 20+ researchers** and deployed at IISER Pune (a Government of India Institute) with minimal infrastructure

Google Drive Clone

- Public cloud built on **Microservices** in Flask, Google Cloud Storage, NoSQL & ReactJS with 2FA file access control to non-users
- **Dockerized** backend services on GCP via API Gateway with **asynchronous** notification service, supporting **5 emails/sec**
- Automated deployment by building a CI/CD pipeline on Google Cloud Build with a **nightly test suite** for reliability

Document Manager for Lawyers

- Standalone desktop app for lawyers with PDF OCR and intelligent cropping with multithreaded execution for efficiency
- **Awarded 3rd place** in a university-wide **Hackathon sponsored by Google Cloud** with 250+ participants

SKILLS

- **Programming Languages:** Java, Python, C#, Racket
- **Technical:** Spring Boot, Microservices, Docker, RESTful APIs, Spring WS, JAXWS, Maven, SOAP, XML, Flask, Tomcat, JMS
- **Cloud & Databases:** Google Cloud Platform, Pub-Sub, Cloud Run, Azure Storage SDK, MySQL, OrientDB, Firebase