**PRANAV JAIKUMAR**

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**­Education**

**Purdue University** **West Lafayette, IN**

*B.S. Computer Science Fall 2019 - May 2022*

*B.S. Mathematics*

*GPA: 3.92 / 4.00*

**Experience**

*Serving as Software Engineer for Markets Technology at Citigroup* ***July 2022 - Present***

* *Released enhancements to Java Spring haircut (collateral discount calculation) service for repo trading app,*

*Gemfire cache persistence, and Oracle database*

* *Upgraded municipal bond ETL flow to support downstream app for fixed income trading app,*

*Kafka topic publishments/subscriptions, and Data Vault modeled warehouse*

* *Migrated Java services processing 10,000+ trades to Gradle and refactored code to eliminate days of tech debt*
* *Used SQL and Linux CLI utilities to troubleshoot production issues for batch and real-time trade processing*
* *Onboarded apisix-based gateway to service Kubernetes pods across team’s 3 environments with resources of*

*20-40 CPU / 160-320 GB memory each.*

*Researched Optimizations to SEAL Algorithm for Graph Link Prediction* ***Jan 2022 – May 2022***

* *Executed Graph Convolutional Neural Network based algo with inputs containing 500,000+ nodes*
* *on Purdue’s computing clusters using Slurm*
* *Reviewed peer-reviewed literature to study addition of negative sampling and hyperparameter input changes*
* *Analyzed algo bottlenecks with PyTorch and implemented producer-consumer threads to improve performance*
* *Filed biweekly LaTeX reports with algorithm accuracy and performance details*

*Served as Software Engineering Intern with GSP CMO structuring at Citigroup* ***June - Aug 2021***

* *Built Serverless Microservice using API Gateway, Lambda Functions, and DynamoDB on AWS*
* *Exposed new endpoint on CMO Structuring Application using Flask*
* *Configured JSON logging with additional metadata for better debugging via Kibana portal*
* *Developed Angular dashboard hitting Spring API endpoints that captured information*

*downstream with Kafka*

*Served as Development Team member for Purdue’s largest hackathon: Boilermake* ***April 2020 - Present***

* *Monitoring and further developing Node app for first virtual hackathon*
* *Using GoLang, Goose, and PostgreSQL to manage backend development*

*Served as Teaching Assistant for Problem Solving and Object-Oriented Programming Course in Java* ***Jan. - May 2020***

* *Holding office hours to assist students*
* *Testing assignments before release to students*
* *Answering questions on 24/7 online discussion forum*

**Projects**

*Shell Interpreter* ***March 2021***

* *Parsed command-line input using Lex and Yacc*
* *Implemented the execution of terminal commands using C/C++ system calls and*

*auxiliary logic*

*Pre-Med Networking Web Application* ***June 2020 – Aug 2020***

* *Developed for 501(c)(3) nonprofit organization founded by pre-med students*
* *Built application using Microsoft-Apache-MySQL-PHP tech stack with Bootstrap*

*and Javascript for front-end*

* *Hosted dynamic site on AWS*

*MIDI File Parser and Modifier*  ***March - April 2020***

* *Program parses binary music files into structs using C*
* *Manipulates the structures to change playtime speed, octave, and instruments*

**Technical Skills**

*Java, SQL, C, Python, Docker, Kubernetes, Git VCS, Linux CLI tools, Angular, JavaScript, Docker, PHP, HTML, GoLang*