MAYANK GOVILLA

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Education

Worcester Polytechnic Institute (WPI) | Worcester, MA   **May 2023**
Bachelor of Science in Computer Science and Robotics Engineering **(GPA: 3.92/4.0)**
Related Courses: Software Engineering, Algorithms/Data Structures, Web Development, AI
Certifications: AWS Solutions Architect Associate   Sep 2021

Languages & Frameworks:
- Java, Python, C/C++, Go, TypeScript, Git, Bash, ReactJS, Node.js, Docker, Kubernetes, GraphQL, AWS

Professional Experience

SDE Intern | Amazon Robotics | Boston, MA   May 2022 – Aug 2022
- Extended workcell design with the _Strategy Design Pattern_ in _Java_ to implement experimental algorithms for estimating fullness of warehouse trailers
- Designed new estimation algorithm using _Linear Regression_ that exhibited 50% less variance
- Piloted 2 algorithms at 10 trailer doors in a warehouse and collected customer feedback in person
- Utilized _AWS SDK_ to emit metrics about the estimators to compare performance over 3 weeks

Software Engineer | Jahnel Group | Schenectady, NY   Jun 2021 – May 2022
- Created party planning web application utilizing _React_, _GraphQL_, and _Express_
- Developed _RESTful_ microservice in _Go_ to model a file system in _CockroachDB_ with a closure table. It exposed methods for CRUD operations where update and delete affect the whole file subtree.
- Decoupled system of 4 microservices to comply with best practices for availability
- Automated documentation and test generation with _Swagger_ tools to save 20+ hours of work
- Managed integration tests in _Postman_ and refactored error messages to increase dev efficiency
- Presented sprint progress every 2 weeks to the larger workstream of 50+ people

Lead Software Engineer | BW Hospital Navigation App | Remote   Jan 2021 – Mar 2021
- Developed indoor navigation desktop application with _JavaFX_ and the _Google Maps API_
- Reviewed 100+ pull requests with feedback and kept team on track with daily _scrum_ meetings
- Implemented _A*_ in _Java_ with streams for efficient pathfinding in a graph with 350+ nodes
- Incorporated _Singleton_ and _Observer_ design patterns and _Guice_ for dependency injection

Intern | Harmoni BioSolutions | Remote   Jun 2020 – Aug 2020
- Adapted _Python_ script to analyze Next Generation Sequencing data 5x faster than the existing solution using _multiprocessing_, saving over 80 hours per analysis
- Migrated the existing _data pipeline_ to the cloud with _Google Cloud Platforms_

Additional Experience

Teaching Assistant | Systems Programming & Operating Systems | WPI   Aug 2021 – Present
- Led class of 20+ students through exercises to learn _C/C++_ and test-driven development hands-on

Goatbook App | Hack@WPI   Jan 2021
- Created subscriber based social media app in _Flutter_ over the course of 36 hours
- Designed real-time messaging system with a _NoSQL_ database (_Firestore)_ with group chats
- Integrated Google Sign In through _Firebase_ to access user photo and email

Activities

New Member Educator | Sigma Pi Gamma Iota | WPI   Jan 2021 – Mar 2021
Field Technical Advisor | FIRST Tech Challenge | NJ   Summers 2018-20