Jacob Goldverg

www.github.com/jgoldverg

Email: jacobgol@buffalo.edu
Cell: Upon Request

EDUCATION

University at Buffalo, The State University of New York — Buffalo, NY
Bachelor of Science: Computer Science, Mathematics — December 2021

RELATED EXPERIENCE

University at Buffalo - Data Intensive and Distributed Computing Laboratory(DIDCLAB) — Buffalo, N
Research Assistant under Dr. Zola and Dr. Kosar — Feb 2020 - Pres

- **Data Transfer Pipeline**: Engineered a data transfer service that applies protocol level optimization to a data transfer allowing for network and energy optimization. Directly competes with RClone by being able to mix three kinds of optimization: pipelining, concurrency, parallelism. This service uses Spring Boot and Spring Batch.
- **DevOps**: Maintained production and development deployments while utilizing the Strangler pattern to transition OneDataShare to a micro-services based architecture. Using EC2, Gitlab Container Registry, Docker, and Elastic Container Service to help the transition.
- **REST API Development**: We use Spring WebFlux and Spring Boot to make sure all user requests are handled asynchronously thus allowing a large user base as well as Swagger for customer client implementations. Redesigned the OneDataShare REST API to the support user deployments of the Data Transfer Pipeline enabling customers to deploy this service to move data directly from their hardware to a variety of destinations such as(FTP, SFTP, HTTP, S3, Box, Dropbox, Google Drive).
- **Distributed Systems**: Using Spring Cloud and RabbitMQ, OneDataShare transitioned to a micro-services deployment by relying on Netflix Eureka to allow our services to securely discover each other while RabbitMQ was used to differentiate between varying kinds of customers as well as message resiliency in the cloud environment.
- **Manager Responsibilities**: Under Dr. Tevfik Kosar and Dr. Jaroslaw Zola I manage a team of 12 people, which entails; running weekly meetings with back-end, front-end, and dev-ops teams. I handled all SSL SSH keys, interview process, and on-boarding process so students of varying experience can begin learning and contributing as quickly as possible.

Stark & Wayne — Buffalo, NY
Software Engineer Intern — Feb 2020 - April 2020

- **External Service Marketplace**: Built a marketplace that deploys Redis to an existing Kubernetes environments while complying with the Open API Specification.

OverOps — Remote
Integration Engineer Intern — May 2019 - August 2019

- **Pivotal Cloud Foundry Tile**: Developed a Pivotal Cloud Foundry Tile that deploys the OverOps Collector and Agent into a customers Pivotal Cloud Foundry environment.
- **OverOps SonarQube plugin**: Engineered a Java-based plugin for SonarQube that uses the OverOps REST API to integrate OverOps reports into SonarQube.

PROJECTS

- **Independent Study under Dr. Kenneth Regan**: Using Python, Regex, pandas, and scikit-learn to study how frequently F.I.D.E. players make mistakes in professional chess tournaments.
- **Pintos**: Designed and implemented kernel modules including threads management, user programs management and virtual memory module.

TECHNICAL SKILLS

- **Programming Languages**: Java, Go, C++
- **Technologies**: Docker, AWS, S3, Spring Framework, Pass(Unix password manager), SFTP, FTP, Spring Batch, CockroachDB, Spring Boot, Spring Security, Spring Data, Spring Cloud, Spring Reactor, Git, Gitlab, Globus, RClone

Relevant Coursework

- **Computer Science**: Data Structures, Systems Programming, Computer Organization, Software Engineering Concepts, Quantum Computing via Linear Algebra, Algorithms & Complexity, Modern Networking Concepts, Operating Systems
- **Mathematics**: Calculus(I, II, III), Differential Equations, Intro to Linear Algebra, Probability Theory, Abstract Algebra, Abstract Linear Algebra, Real Variables I, II