Carlo Preciado

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EDUCATION

University of Notre Dame College of Engineering | Major: Computer Science

RELEVANT EXPERIENCE

Slack Site Reliability Engineer, Demand Engineering **July 2023**

Traffic Control Plane

- Built and embedded a Traffic Control Plane within the Slack infrastructure which provides an automatic way to quickly shift network traffic to different AWS availability zones for load balancing and enabling blue-green deploys in production environments
- Simultaneously iterated upon Traffic Control Plane work with consistent improvements and created internal tools to make using the service more accessible to use, such as a command line tool and a user interface
- Gave presentations to discuss the value that the Traffic Control Plane would add to Slack reliability and ran exercises to onboard incident responders to use the Traffic Control Plane in the event were an availability zone drain was necessary

Monitoring Library for Service Owners

- Created a monitoring library to help the service owners of Slack monitor the ingress traffic from upstream envoy processes and increase discoverability and reliability of services
- Collaborated closely with other service owners to understand needs, pain points, and optimizations to design module library utilization and the creation of detailed documentation for service owners to use the library independently

Center for Civic Innovation Full Stack Engineer **Summer 2021**

Food Desert Mobile App

- Fully developed the Frontend, Backend, and Database for a food recipe recommendation mobile app to serve food insecure communities
- Developed an RPC communication API to transfer data from the Fronted to the Database, with the Backend being the main driver of the program
- Worked closely with a sustainability team, who gave me accessibility-centric ideas into implement into the app

RELEVANT PROJECTS

B Minor Compiler|**Compilers and Language Design** | C, x86, Bison, Flex **Fall 2022**

- Constructed a working compiler that transformed a C-like language into x86 assembly code, with major milestones being the successful implementation of a scanner, parser, source resolver, type checker, and code generator, with dabbles of compiler optimization
- Used the best practices of software engineering throughout the semester by extensively planning, making iterative progress, and creating unit tests to ensure a test-driven development process

Peer to Peer chat room| **Distributed Systems** | Python **Fall 2021**

- Developed a decentralized chat room in python which allowed peers to send global and private messages, while ensuring consistency across the system that guaranteed all appropriate participants would receive the messages sent to them
- Battle tested with topics taught in the class to garner as much resiliency in the system as possible, such as ensuring the system would not crash if a single peer had left the system, expected or not

TECHNICAL SKILLS

Computing: Golang, C, Python, x86, Shell Scripting
Relevant Technologies: Unix environments, Git, Grafana, Consul, Envoy
Relevant Coursework: Compilers, Distributed Systems, Operating Systems, Data Structures and Algorithms

INTERESTS

Building Compilers | Programming Languages | Distributed Systems | Low-Level Programming | Basketball | Los Angeles Lakers