

Prabin Sapkota

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EDUCATION

GOOGLE TECH EXCHANGE

Sunnyvale, CA

Jan 2020 - May 2020

HOWARD UNIVERSITY

BS IN COMPUTER SCIENCE

Aug 2017 - May 2021 | Washington, DC

GPA: 3.97 / 4.00

LINKS

Github:// [prabinspkt](#)LinkedIn:// [prabinspkt](#)

COURSEWORK

GOOGLE TECH EXCHANGE

Applied Data Structures

Software Development Studio

Product Management

HOWARD

Computer Organization

Programming Languages

Unix Lab

Discrete Structures

Linear Algebra

Database Systems

Applied Data Science

Data Communication and Network

Programming

Intro to Machine Learning

SKILLS

PROGRAMMING

Python • Go • C • C++ • C# • Java

JavaScript • Bash • Mips

DATABASES

MySQL • Firestore

TECHNOLOGIES

Git • PKI • Linux utilities • .NET • Docker

REST API • Service Fabric • Azure • Make

CI/CD • Protocol Buffers • Flume • Kafka

Distributed Systems • Microservices

Wireshark

SOCIETIES

2019 Tau Beta Pi

2018 NSBE • 2017 ACM

HONORS

2017-Present Dean's List

2017 Capstone Scholar

EXPERIENCE

MICROSOFT | SOFTWARE ENGINEER INTERN

May 2020 – July 2020 | Redmond, Washington

- Implemented a new collection type called IReliableTopic in Reliable Collections (highly available, replicated, and transactional) library of Service Fabric using existing replicator stack. IReliableTopic adds pub/sub functionality to Reliable Collections.
- Wrote Performance test for a production-like Service Fabric environment in Azure. Wrote Performance unit tests, Stress unit tests, and Basic Operations unit tests for local testing.
- Presented among 30 engineers a Service Fabric demo app with an ASP.NET Core Stateful backend service which used IReliableTopic for data storage.
- Stacks used: .Net, C#, Service Fabric, Git, Azure, Nuget, TraceViewer.

GOOGLE | ENGINEERING PRACTICUM INTERN

May 2019 - Aug 2019 | Mountain View, CA

- Set up Flume (high throughput parallel-processing) pipeline in C++ to generate qualitative and quantitative metrics about efficiency and resource usage of the Ads Review process at Google. Visualized metrics using Google's Dashboard service (similar to Tableau).
- Packaged binaries, set up a release with continuous integration, and deployed to one Borg production cell.
- Spearheaded in designing the project and presented it for review among more than 15 engineers. Presented the final product among hundreds of Google engineers.
- Stacks used: Protocol Buffers, C++, GoogleSQL, Flume Pipeline, Borg.

GOOGLE | ENGINEERING PRACTICUM INTERN

May 2018 – Aug 2018 | Mountain View, CA

- Implemented a debugging tool in Ads serving stack that facilitated the automation of a user-labelling and user-targeting service by collecting and returning runtime data (in graphical form) upon HTTP request.
- Injected modules/handlers in the existing server, keeping them out of the critical path to avoid latency in the main service.
- Collaborated with an intern in designing the project and presenting it for review among 10 engineers. Presented the final product among hundreds of Google engineers.
- Stacks used: Protocol Buffers, C++, HTTP.

PROJECTS/ EXTRACURRICULAR

3 SECONDS SONG CHALLENGE

A song based challenge application built with React on Firebase backend (Firestore, Firebase Authentication, Firebase Deployment).

Spotify integration for user's songs, playlist data, and leaderboard functionality.

INSTRUCTION COUNT FEATURE IN QTSPIM

Added a feature using C++ to count, track, and display number of instruction runs of a MIPS program in QtSpim.

Used C++ and Qt Framework.