SAFAL LAMSAL

SOFTWARE ENGINEERING MAJOR - SOFTWARE ENGINEERING INTERN

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ABOUT ME

Technical Skills	Python, C/C++, Unix/Linux, SQL/NoSQL, React Native, C#/.NET, Java
Web & Design	HTML/CSS/JavaScript, React/Redux, Flask, NodeJS/Express, BootStrap/jQuery
Interests	Machine Learning, Cryptography, Distributed Systems, Security

WORK EXPERIENCE

Software Engineering Intern

Charles Schwab & Co., Inc.   Westlake, TX (Jun 2019–Aug 2019)
- Designed, implemented and presented performance testing framework for database replication feature
- Assisted refactoring of tightly bound messaging logic on huge codebase to a separate library
- Researched and implemented resilience and transient-fault-handling policies ex. Retry, Circuit Breaker, Timeout, and Fallback on outbound service calls
- Wrote comprehensive unit tests and mocked external dependencies
- Tools Used: C#, .NET, Aerospike, IBM MQ, Polly Project, MSTest, Moq

Research Assistant

Department of Computer Science and Engineering, UTA   Arlington, TX (Jan 2018–Sep 2018)
- Investigated, designed, and implemented cache replacement algorithms ex. LRU, LIRS, ARC
- Focused on a data-driven approach to find strengths/drawbacks on widely used algorithms
- Experimented with LIRS drawbacks vs. LRU to make sure LIRS always performs better/same as LRU
- Tools Used: Python, C, C++

PROJECTS & COMPETITIONS

Decentralized HealthCare System - HackUNT   (Apr 2019)
- Won Best Use of Blockstack for building a DAPP for decentralized storage and sharing of health information
- Designed and implemented the front-end interface for both the doctor and the patient using React.js
- Integrated the Blockstack SDK and used public-private key encryption for file storage and sharing of files

TruckLo   (Aug 2018 - Nov 2018)
- Built a cross-platform mobile app to explore, locate, and review food trucks nearby using React Native
- Implemented real-time location on a Google Maps component in-app using firebase
- Designed the user interface using wire-frames/prototypes and user experience between screens

HackUTA 2018   (Oct 2018)
- Won Facebook's Best Community Building Project
- Built a web app to keep track of your hourly activities and provide data visualization on user's data
- Designed the user interface and set up back-end using PostgreSQL database and Flask web server

HackRice 8 at Rice University   (Sep 2018)
- Won the Chevron company sponsored challenge
- Built a web app in group of 3 to optimize the work order process in Chevron complex process facilities
- Designed the database using an ORM and created REST API endpoints using Flask web server in Python

EDUCATION

The University of Texas at Arlington   Arlington, TX (May 2020)
- Bachelor of Science in Software Engineering
- Relevant Coursework: Object-Oriented Programming, Algorithms & Data Structures, Operating Systems, Computer Organization & Assembly, Discrete Structures, Theoretical CS, Software Testing, Data Mining
- In-major GPA: 3.76/4.00

freeCodeCamp   (2018–Present)
- Front End Web Development Certification
- JavaScript Algorithms and Data Structures Certification