NEELAKSH BHATIA

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SKILLS

Languages: Python · TypeScript · Javascript · C · C++ · Java · SQL · Swift · Bash

Tools: NodeJS · MySQL · Flask · Express · gRPC · Postgres · Redis · Git · AWS · ReactiveX

EXPERIENCE

Lifion by ADP
New York, NY
Software Engineering Intern (Backend)
Jan 2020 - April 2020

- Worked on optimizing Lifion-SQL (an abstraction of SQL), which is used as the foundation for ADP / Lifion's HCM applications
- Reworked LSQL data pipelines to add support for large query results (5M+ rows) by adding **data-streaming** capabilities, resulting in a **10%** reduction of query latency and **2x** the number of possible concurrent DB connections
- Implemented query token caching in the LSQL AST tree, resulting in **95%** faster lookups and support for efficient live previews

Splunk
San Jose, CA
Software Engineering Intern (Mobile)
May 2019 - Aug 2019

- Designed and implemented a (patent-pending) low-light QR code parsing framework that is used by 700k+ monthly active users using a **custom CNN** and **ARKit**, improving detection accuracy from 40.3% to **97.7%**
- Added the ability to view videos, images and PDFs in augmented reality while reducing CPU/GPU usage from 100% to **78%** (under average load) in the Splunk AR app
- Maintained the internal iOS networking SDK (Spacebridge) by responding to developer and customer feedback using **Swift**, enabling customers to use Splunk AR features on prem

Secret Mission Software
Toronto, ON
Software Engineering Intern (Fullstack)
Sept 2018 - Dec 2018

- Built a P2P chat system for a cosmetic social media app (**500k+ installs**) using the extensible messaging and presence protocol (**XMPP**)
- Created a **distributed backend microservice** for chat by utilizing gRPC and Protobufs, which reduced the size of the network request payload by **81%**
- Integrated the ReactiveX and IGListKit frameworks to create a highly performant and light-weight frontend experience by **minimizing UI redraws** and using a **just-in-time data fetching paradigm**

TD Bank Accelerator Lab
Waterloo, ON
Mobile Development Intern
Jan 2018 - Apr 2018

- Developed an **augmented reality mode for walking navigation** in the TD Bank app to help point the way toward ATMs and bank locations, using **Swift**, **Flask** and **ARKit**
- Conducted consumer research, brainstormed potential improvements, and iterated weekly based on internal and external user testing

Wattpad
Toronto, ON
Software Engineering Intern (QA + Web)
May 2017 - Aug 2017

- Applied a **probabilistic search algorithm** on a spam detector tool, improving the detection speed by **5x**
- Developed an internal dev-ops system in ReactJS and Python to automate the delegation of JIRA tickets/stories

PROJECTS

Jarvis - NLP IoT Assistant
Python · Express · C

- A smart-assistant / extensible platform that acts as a bridge between the command line and all of your IoT devices
- You can interface with Jarvis via an **intent-action system** using **natural language** right from the terminal

Notey - Low Latency Markdown Parser
Python · React · Firebase

- An all-in-one Markdown/LateX note-taking platform designed for university students
- Uses a modified Markdown parser that doesn't block for long periods of time as to offer **real-time, inplace formatting**

EDUCATION

University of Waterloo - 4A Computer Science
Waterloo, ON
Bachelor of Computer Science
Sep 2016 - April 2021