Srihari Vishnu

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TECHNICAL SKILLS

Languages: C/C++, Python, Kotlin, JavaScript, Java, HTML & CSS, Swift, SQL (MySQL)
Tools & Frameworks: Android Studio, Firebase, Raspberry Pi, Express.js, Arduino, React, Unity, Docker

EXPERIENCE

Software/Systems Developer Intern - GitHub
Oct 2019 - Oct 2020

Open Learning Exchange – Treehouses Team

- Developed an **Android app** to connect to a headless **Raspberry Pi** over **Bluetooth** for **30+** schools in remote countries
- Worked on a functional SSH Client to allow server operators in remote regions to connect to an SSH server
- Redesigned multiple screens and decreased the app size by over **15%**, which resulted in positive user feedback
- Created a UI interface for servicing and monitoring the status of services in the form of **Docker** containers
- Implemented a **multi-threaded** Bluetooth server for the Raspberry Pi, allowing for up to 5 concurrent processes

PROJECTS

Flappy Bird Agent (Machine Learning) - GitHub
Oct 2020 - Dec 2020

Technologies: Python, TensorFlow, Reinforcement Learning

- Incorporated **Reinforcement Learning** and **Genetic Algorithms** to train an agent to play the game Flappy Bird
- The agent achieved **20x** higher scores than the average human player, with only the game state as input

GameFace (Group Video Chat + Social Media Android App) - GitHub
Apr 2020 - Aug 2020

Technologies: WebRTC, Node.js, Firebase, Android Studio, MVVM, CI/CD, Google Cloud

- Created an **Android** Group Video-Calling application that utilizes the peer-to-peer connection protocol
- Developed a **REST API** with **Node.js + Express.js** for user purchases, authentication and **Firebase** database operations
- Implemented clean design practices by leveraging the **MVVM** Design Pattern and used **CircleCI** for CI/CD

Nova (Programming Language) - GitHub
Jul 2020 - Oct 2020

Technologies: C++, Makefile, GNU Tools, GitHub Workflows

- Built an interpreted programming language written in **C++** that has functional recursion, variables and lists
- Leveraged the **Visitor design pattern** to create a flexible and scalable **Lexer, Parser and Interpreter**

EasyLang - Hack the North 2019 (Real-time object classifier) - GitHub
Sep 2019

Technologies: Java, ML-Kit, Android, ARCore

- Constructed a **real-time object classifier** on **Android** that translates an object name to a given language
- The app displays the result as a label on the object in **Augmented Reality** so users can learn a language in 3D

EDUCATION

Bachelor of Software Engineering
Expected Feb 2025
University of Waterloo - GPA: 96.18%

ACCOMPLISHMENTS

- Top 5% of participants in Canadian Computing Programming contest (Honour Roll with Distinction)
- HackerRank Advanced Problem-Solving Certificate
- Class of 2020 High School Valedictorian