Vybhav Achar Bhargav

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experience

RealTime, Novateur Inc Santa Cruz, CA
Android Developer | October 2017 - September 2018

- Created an application that allows students to find events and meet others through events and experiences.
- The application was written in **Kotlin,** bundled with **Java** for smaller components of the application
- **Amazon Web Services** used to handle backend calls. **Firebase Database** used to store user data.
- Worked with **Firebase Authentication** along with the **Twilio** API for secure authentication and phone number verification of users.
- Used the **SendBird** API for the in-app messaging service, giving users the ability to discuss the events with others

Team 2473, Cupertino High Robotics Cupertino, CA
Software Engineer/Software Mentor | June 2016 - September 2017

- Worked with a group of 40 students to create, design and build a robot during the FRC 2016-17 season
- Supported the development of the main control systems, using **Java**, to aid in debugging and testing of the robots through gameplay. Along with **PID Motor control** for the robot drive train
- Built a server-based simulation environment using **Python** to automate queuing of parts testing and Java along with the **Solidworks Simulator** to simulate new parts on a test rig and run automated script testing in the **FRC Simulator.**
- Built a custom set of network utilities to allow a Raspberry Pi to communicate with the robot.
- **OpenCV and LIDAR systems** with Python used to teach the robot obstacle avoidance and targeting for better autonomous gameplay

projects

vybhavb
My personal website and blog. Built with **Bulma**, **Vue**, and **Nuxt.js** to use server side rendering.

choreganizer
A centralized location for roommates to assign chores to each other. Used **Firebase** for the authentication and storage, **Next.js** for server side rendering and **Progressive Web App(PWA)** support which simulates the app to seem native on the major mobile platforms.

whenu
A multi-platform application to access the menus of various dining halls and gives the user the option to find where and when a dish is served. Uses the open source **menu-scrape** api, **React** and **PWA** support

menu-scrape
an open-source automated dining hall menu scraper to efficiently scrape, store and deliver data from various universities. Built using **Cheerio.js** to scrape the web pages, hosted on **Zeit's Now** platform, **Redis** to store data along with **Amazon Web Services** to automate daily menu retrieval

seizeIt
a research hiring platform to connect highly qualified students with professors and automatically alerts students/professors about potential candidates. Built with **Angular** and hosted on **Heroku**

verifAi
a minimalistic attendance interface to make the process of taking attendance quicker and easier. Allows teachers to create classes and uses students geolocation to make sure they are in class. Built with **Java** to build an **Android** application and **Angular** to build a web platform.

education

University of California at Santa Cruz (Santa Cruz, CA)
B.S Computer Science
September 2017 - July 2020
- *Courses:*
Programming in **C** and **Java**
Algorithms and Data Structures
Comparative Languages
Intro to Analog Circuits
Assembly
Computer Architecture,
Distributed Systems
Operating Systems
System Design
Discrete Mathematics
Vector Calculus, Linear Algebra

skills

Javascript
Node.js, React, Cherrio.js, Vue.js, Flutter, React Native, Electron, light.js, Progressive Web Apps, Express

Python
Flask, Tensorflow, OpenCV

Java
Kotlin, Android App Development

C/C++
Systems design, utilities

Web
HTML, CSS, PHP, Ruby on Rails

Database Systems
MySQL, PostgreSQL, Heroku

Firebase
Firebase Auth, Realtime Database, Firestore, Cloud Functions, Hosting

Git, CI/CD
Git, Travis ci, Circle ci, Netlify

Linux/Unix/Posix
Arch Linux, Bash, ZSH

Assembly
Risc-V, MIPS, intel x86

Serverless
Now.sh, AWS Lambda

interests

Natural Language Processing
NeuroEvolution of Augmenting Topologies
Security Analysis
Capture The Flag
Network Management
Network Security
Photography
Distributed Systems
Self Driving Cars