Aveek Duttagupta

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EDUCATION

University of Michigan, Ann Arbor — *CSE*

SEPTEMBER 2019-APRIL 2022 (EXPECTED)

Relevant Coursework: Accelerated Programming, Programming and Intro Data Structure, Discrete Math, Algorithms, and Foundations of Computer Science

Activities/Societies: Consultant at MPowered Entrepreneurship, Michigan Data Science Team Lead at Michigan Hackers, Student Founder at optiMize

EXPERIENCE

University of Michigan, Ann Arbor — *Research Assistant*

SEPT 2019 - PRESENT

- Designing and implementing an alternative to cloud-based development platforms such as Kubernetes and Istio using the Google Assistant; clients would be able to set-up cloud backends solely with their voice

HELLA, Northville — *Advanced Engineering Intern*

JUNE 2019 - PRESENT

- Programming Lead for Vehicle to Vehicle (V2V) charging platform, developed a cloud-based application that communicated with Amazon Web Services (AWS) using React Native and XCode (CoreLocation, Amplify, and MapKit frameworks)
    - Utilized AWS to store, push, and pull data from mobile devices on the same server
        - Users could discover each other's locations and negotiate transactions to exchange charge similar to the UBER platform
- Worked on the development team for 22-Kilowatt, 4 kW/L, On-Board Charger (OBC) for Battery Electric Vehicles
- Designed and built a PCB for the OBC, to successfully convert 12-pin TE connector to debugger board

PERSONAL PROJECTS

Autonomous Weather Rover

Built a model four-wheeled rover powered by Raspberry Pi (Sense HAT), Arduino, OpenWeatherMap and SciPy(python); software on-board is capable of getting nearby and historical weather data and then using regression-based algorithms on SciPy to make future weather predictions

Movement Based Light Switch

Powered by Twilio, Arduino (C++), NRf24l01 Transmitters, and HC-SR04; could turn lights based off nearby movement and would send a text message through Twilio upon activation

DIY Google Home

Powered by Raspberry Pi, Twilio, Google Cloud Console and IFTTT; fully working Google Home capable of sending messages through the Twilio Service to mobile device (ex. automated text messages) and controlling surrounding lights

Financial Subreddit Analysis

Created a python script capable of scraping through various financial subreddits (such as r/investing and r/wallstreetbets) and used sentiment analysis to create real-market predictions

SKILLS

- Experienced with cloud computing software such as AWS, Google Cloud Console, Twilio, and Firebase

- Worked in App-dev in iOS/MacOS on XCode (including sharing/using Frameworks) and React Native.

- Designed production-ready PCB layouts using Design Software including KiCad, Spark PCB Design, and Autodesk EAGLE

- Familiar Programming Languages: C, C++, Java, JavaScript, Swift, and Python