Mayank Daruka

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EDUCATION

The University of Texas at Austin, Austin, TX **May 2023**

- **Bachelor of Science in Computer Science** and **Mathematics** **GPA:** 3.97
- **Interests:** Full-Stack Web/Mobile App Development, Deep Learning, Natural Language Processing, Data Science
- **Relevant Coursework:** Data Structures, Discrete Math, Multivariable Calculus, Computer Architecture, Linear Algebra
- **Programming Languages:** Java, Python, C, JavaScript, HTML/CSS, SQL, Dart
- **Technologies:** Flask, ReactJS, Redux, NodeJS, ExpressJS, React Native, Tensorflow, Keras, Pandas, Scikit-Learn, Firebase, SQLite, MongoDB, Git, Flutter, Linux, WSL

LEADERSHIP, ACTIVITIES, AND EXPERIENCE

Dive Chat, *Software Engineering Intern* | *Austin, TX* **May 2020 – Present**

- Built web and mobile interfaces of channel-based messaging app (main product) with development team from ground up
- Worked on backend, improved query time by optimizing listeners and web caching, constructed database security rules
- Implemented push notifications, social calendar, contact integration, asset bundling/caching, conversation encryption
- Tech stack: ReactJS, React Native, Redux, Expo, NoSQL, Firebase (Realtime Database, Cloud Storage), Hotjar, AdMob

Texas Convergent – UT Austin, *Build Team Technical Developer* | *Austin, TX* **Feb 2020 – May 2020**

- Worked on a 4-month project to create a mobile budgeting application using React Native that oversees users' finances, displays their transaction records, and maintains a system for tracking item returns – product presented on Demo Day
- Used the Back4App Parse Server REST API for database operation queries and user management/authentication
- Learned to build and design tech prototypes, business proposals, and pitches under the guidance of experienced leads

S.A.M. Singapore Math*, Math Instructor* | *Sugar Land, TX* **Jun 2018 – Sep 2018**

- Tutored Mathematics to 8th grade students using the Socratic method, and managed the daily activities of the center

ACADEMIC PROJECTS

Styudor – Sole Developer/Creator (Android and iOS) **May 2020 – Present**

- Mobile interface with extensive UI/UX, created with Flutter, designed to connect students in need of tutoring in GRE, MCAT, LSAT, and GMAT with highly qualified tutors in surrounding areas – facilitates face-to-face higher quality learning
- Implemented SMS phone authentication with Firebase, created REST API to fetch data with NodeJS, ExpressJS, used MongoDB Atlas for server backend/data storage, utilized Google Maps API to display relative locations of users

Laundry Line – Developer/Creator (Android and iOS) **Feb 2020 – Present**

- Developed a cross-platform app using React Native for UT students that solves laundry-related issues in college dorms
- Utilized Firebase for user authentication, email verification, and Firebase's Cloud Firestore for data storage
- Extensive UI/UX that displays the real-time status of laundry machines on each floor and allows texting individualized for students living on the same floor using the GiftedChat API; management of data flow using Redux

Red Meter – Sole Developer/Creator **Apr 2020 – May 2020**

- Built and deployed a webpage with Flask that extracts patterns and analyzes Texan sentiments about Trump with NLP
- Streamed tweets regarding Trump in real-time to a Pandas dataframe; used SQLite3 to manage CRUD operations
- Trained a Keras RNN model with 1.6 million tweets and Word2Vec embeddings in Tensorflow to detect polarity in texts
- Performed sentiment analysis on real-time data with the ML model and updated statuses of cities accordingly

Kinetic Keys (Computer Real-Time Vision) – Developer/Creator **Jan 2020 – Mar 2020**

- Created an interactive browser-based interface with ReactJS and Material UI components that utilizes a webcam, allowing the user to make alphabet-like poses to create letters that spell out words (kinetickeys.netflify.com)
- Incorporated a Tensorflow Machine Learning model that was trained with ~5000 images to recognize human poses
- Showcased product and presented demo to company recruiters/engineers at Texas Convergent Side Project Expo 2020

MNIST Handwritten Digit Recognition

- Developed and deployed a Convolutional NN to carry out the image classification of thousands of handwritten digits acquired from the MNIST Database, using the Tensorflow.js Layers API. Trained the model using 55,000 images

OTHERS

Hackathons Attended: HackTX 2019, LeapHacks 2020, SummerHacks 2020
Honors and Awards: National AP Scholar; National Merit Commended Scholar; Siemens Foundation Merit Scholar
Training/Certifications: AWS Machine Learning, ReactJS + Redux
Work Authorization: Eligible to work in the US with no restrictions