JAEYOUNG (JASON) PAK

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SKILLS

Languages (in order of proficiency): Java, JavaScript, HTML/CSS, TypeScript, C, C#, MATLAB, Python, Bash, Rails
Frameworks/Technologies: ReactJS, React Native, Angular, Node.js, Git, Unity, Electron, AWS, Android Studio

EDUCATION

Dartmouth College Hanover, NH | **Sep 2020 – June 2024**
Bachelor of Arts, Computer Science and Music **GPA: 3.99 / 4.0**

- **Honors**: Neukom Institute for Computational Science Scholar, Rufus Choate Scholar (Top 5% Honors), Academic Citation for Meritorious Performance (3-time Recipient), DIFUSE Data Science Lab Grant Recipient

EXPERIENCE

Capital One McLean, VA | **Jun 2023 – Aug 2023**
Software Engineer Intern

- Built a user-friendly **desktop application** using **Angular** and **Electron**, empowering users to create and modify marketing webpages without the need for writing code
- Developed a seamless chat interface by leveraging the power of an **AI language model**, enabling users to create and modify web content through natural language inputs
- Demonstrated effective collaboration and leadership skills by engaging with stakeholders to gather project requirements, and worked with a team of developers to translate ideas into functional software features

Digital Applied Learning and Innovation (DALI) Lab Hanover, NH | **Sep 2021 – Present**
Software Engineer & Development Mentor

- Delivering software products for clients under **10-week deadlines**, managing a workload of 15+ hours per week alongside coursework as a developer for Dartmouth's tech-entrepreneurial program
- Built a mobile app in **React Native** where users can anonymize their voice during virtual mental health coaching sessions
- Built a full-stack web application using **React** and **MongoDB** to help ranchers monitor cattle weight during calving cycles
- Learned **Ruby on Rails** to debug the codebase for the sexual violence prevention program used by 1,500+ first year students
- Currently serving as the **lead developer** on projects, actively mentoring new members, communicating development updates to project partners, and reviewing new member applications

MathWorks Natick, MA | **Jan 2023 – Mar 2023**
Software Engineer Intern

- Designed and developed a new **domain specific language (DSL)** that allows users to easily describe, modify, and understand MATLAB Simulink block diagrams, **reducing verbosity by an average of 94%** from its predecessors
- Developed a **compiler** in JavaScript that utilized **abstract syntax trees** and a JSON-based intermediate representation to interpret the DSL input and generate the corresponding Simulink diagrams
- Added **bidirectional** support by building a second compiler that converts existing Simulink diagrams to the DSL
- Wrote comprehensive **unit tests** in JavaScript to verify the performance of each individual unit in the language compilers

Vitalize Care Remote | **Jun 2021 – Dec 2021**
Software Engineer

- Used **React Native** to develop the first public beta of a **mobile wellness app** tailored to healthcare professionals
- Built a backend **CRUD API server** using **Node.js, Express, and mongoDB** to handle server requests for app functionality

PERSONAL PROJECTS

AR Drum Set | https://github.com/jasonpakk/AR-Drumset

- Created an **augmented reality (AR)** experience using **Unity** and **C#**, enabling users to interact with a virtual drum in their real-world environment to compose, record, and save personalized drum tracks to their mobile device

Doodlegram | https://github.com/jasonpakk/doodlegram-FE

- Developed a **full-stack social media app** using **React** for the frontend and **mongoDB**, **Express**, and **Node.js** for the backend, allowing users to create doodles on a virtual canvas and share it with other users

Bot-thoven | https://github.com/jasonpakk/bot-thoven **|** *Nominated for 2021 Hackaday Prize – "Redefine Robots"*

- Built a programmable **xylophone-playing robot** capable of performing a wide range of musical tunes, while incorporating dynamic musical expressions by precisely striking the xylophone keys with varying speeds and torques