JACK KEANE

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EDUCATION

Dartmouth College, Hanover, NH **June 2022**
Bachelor of Arts, Major in Computer Science, Minor in Quantitative Social Sciences **GPA 3.71/4.0**
Relevant Coursework: Algorithms, Software Design and Implementation, Full-Stack Web Development, Machine Learning, Discrete Mathematics, Deep Learning, Artificial Intelligence, Problem Solving via Object-Oriented Programming
Honors: College Honor List 2020-2021 (Third Honor Group)

WORK EXPERIENCE

Digital Applied Learning and Innovation (DALI) Lab, Hanover, NH **January 2021-Present**
Software Engineer, Mentor
- Collaborated with 5-6 person teams of developers, designers, and project managers to design and build full-stack projects for clients in an on-campus startup incubator using TypeScript, React, Express, and MongoDB.
- Mentored new developers on technologies used in DALI as well as best programming practices.
- Built an Express server template in TypeScript configured with a database, testing libraries, and request validation to save 10 developer teams, each year, up to 1 week of work.

Bank of America, Pennington, NJ **June 2021-August 2021**
Software Engineer Intern
- Improved enrollment workflows for managed investment accounts by developing a program in C# and Python to automate enrollment failure report across 74 possible scenarios, which saved developers 8 hours of manual work each week.
- Collaborated with other developers routinely to navigate internal services for automation program.

Dartmouth College, Hanover, NH **March 2021-June 2021**
Research Assistant: Reinforcement Learning
- Collaborated with a professor to research and design an introductory course in the computer science department for reinforcement learning.
- Created assignments and projects to help students build intuition about reinforcement learning concepts and algorithms.

Dartmouth College, Hanover, NH **September 2020-March 2021**
Teaching Assistant: Machine Learning
- Guided 60 graduate and undergraduate students through basic machine learning algorithms for classification, regression, and clustering on a conceptual level as well as an implementation level using Python and scikit-learn.
- Administered office hour sessions to help students in problem-solving and debugging through assignments.

PROJECTS

Therabot, Geisel School of Medicine **June 2020-Present**
Research Assistant, Software Engineer
- Performed research focused on the development and testing of a chatbot to treat anxiety and depressive disorder, which is aimed to lower access barriers for treating mental health.
- Architected the application infrastructure, comprising of a Flutter mobile application, a chatbot service using ParlAI, a FastAPI and TensorFlow machine learning service, and a Firebase database. Used AWS for deployment of services.
- Spearheaded the training of the chatbot through curating data and scheduling training scripts with Torque on high performance computing clusters. Assessed trained chatbot quality through quantitative and qualitative metrics.

BetMate, DALI Lab **March 2021-August 2021**
Software Engineer, Project Manager
- Worked with early-stage startup BetMate to develop a platform to spectate and wager on chess games with virtual currency.
- Architected the backend server with TypeScript, Express, and Socket.IO to broadcast chess games and process wagers, equipped with thorough unit testing and integration testing with Jest.
- Developed and deployed machine learning microservices, which determined betting odds, on AWS Lambda, allowing for the scalability to manage up to 20 requests concurrently.

SKILLS & INTERESTS

Languages: TypeScript, Python, JavaScript, HTML, CSS, Java, R, C#, C, Bash
Frameworks and Libraries: Node, Express, React, Redux, Jest, Socket.IO, NumPy, Jupyter, scikit-learn, PyTorch, Webpack
Tools: Git, ZenHub, Linux, Docker, MongoDB, AWS (EC2, ECR, ECS, Lambda), Firebase, Heroku, Postman, Figma, Slack
Additional Interests: Skiing, Fantasy Football, Space, Traveling