

# Matthew R. Feng

mattfeng@mit.edu

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<b>Education</b>	<b>Massachusetts Institute of Technology</b> , GPA: 4.9/5.0 B.S. in Electrical Engineering and Computer Science Coursework: <i>Design and Analysis of Algorithms, Machine Learning, Computational Biology, Machine Learning for Molecular Engineering, How to Make Almost Anything, Organic Chemistry</i>	Expected 2022
<b>Experience</b>	<b>Software Engineer</b> , Broad Institute, Cambridge, MA <ul style="list-style-type: none"><li>• Developed a web application to simplify FEP calculations for protein-ligand binding.</li><li>• Interfaced with compute nodes in Google Cloud Platform to automatically scale to the number of outstanding jobs.</li><li>• Written in React for frontend and Python for backend scripts.</li></ul> <b>NLP and Software Engineering Intern</b> , Blue Fire AI, Hong Kong <ul style="list-style-type: none"><li>• Developed internal Python package to streamline the natural language processing pipeline, enabling faster iteration and consistency in commonly used language routines, such as text segmentation.</li><li>• Applied state-of-the-art language models to Mandarin financial news sources to extract salient and unique events within articles.</li></ul> <b>Software Engineering Intern</b> , Nasdaq, Boston, MA <ul style="list-style-type: none"><li>• Created a web framework and SDK for using Nasdaq financial microservices (e.g. Matching Engine) to accelerate development of new services (e.g. Sports Betting). Built with Java Spring Boot and React.</li><li>• Used Docker, Kubernetes, and Helm to deploy a beta version of the site for internal demos to validate the value of the project.</li></ul> <b>Software Engineering Intern</b> , Fireflies.ai, San Francisco, CA <ul style="list-style-type: none"><li>• Used topic models and word vectors to implement semantic search within transcribed conference calls.</li><li>• Designed, built, and shipped the front-end user interface for viewing transcribed calls within a team organization.</li></ul>	Summer 2020  Summer 2019  Winter 2019  Winter 2018
<b>Projects</b>	<b>OpenAI Agents</b> , algorithms for reinforcement learning <ul style="list-style-type: none"><li>• Implemented various reinforcement learning (RL) algorithms, including deep Q-networks (DQN), proximal policy optimization (PPO), and asynchronous advantage actor-critic (A3C), using PyTorch and TensorFlow.</li></ul> <b>Redirect2</b> , a low dependency custom URL shortener <ul style="list-style-type: none"><li>• Developed for various clubs to allow important links to be more easily remembered. Written in Node.js.</li><li>• Dockerized for easy deployment.</li><li>• Github: <a href="https://github.com/mattfeng/redirect2">https://github.com/mattfeng/redirect2</a></li></ul>	Summer 2018  Summer 2018
<b>Technical Skills</b>	<u>Languages</u> : Python, C++, HTML, CSS, JavaScript, TypeScript, Bash <u>Software</u> : Node.js, Express.js, React, Amazon Web Services (ECS, Batch), Kubernetes, Docker, ElasticSearch, PyTorch, NumPy, Pandas	