Jasmine Shone

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Education

Massachusetts Institute of Technology | Cambridge, MA | Expected 2026
B.S. in Computer Science | GPA: 5.0/5.0
Relevant Coursework: Design and Analysis of Algorithms, Deep Learning, Software Construction

Work Experience

LIS Group @ MIT CSAIL, Cambridge, MA | AI Research Intern **Feb 2024 - Present**

- Implementing and evaluating 20+ policy network/vision encoder variants in existing code base utilizing Linux, PyTorch, CUDA, HPC to improve generalization for robots, supervised by Professor Kaelbling and Lozano-Perez
- Investigating object-oriented diffusion policy using RPN/Segment Anything, object-wise attention/transformer, and utilizing vision foundation models (Dino v2, CLIP, Theia) as image encoders, improving performance by 27.5%
- Collaborating with 6+ mentors/peers, incorporating feedback in Visual QA keypoint matching pipeline

Boston Derm Advocate, Cambridge MA | Software Development and AI Intern **Jan 2024 - April 2024**

- Trained Python machine learning models predicting dermatology product sentiment from 3000+ amazon reviews and ingredient data, narrowing 6680 features to 10 most relevant features using feature selection and improving Random Forest/XGBoost performance by 6.55%.
- Established an automated web scraping framework for the PubChem site, facilitating the retrieval of data on 1.11 million compounds; enhanced efficiency by improving ingredient-compound association accuracy by 30%.

App Inventor Group @ MIT CSAIL, Cambridge MA | AI Research Intern **April 2022 - Feb 2023**

- Optimized pipeline, evaluated 10800 lines of generated code for testing few-shot prompt synthesis for LLMs
- Designed a novel algorithm called p-mRMR in Python which adapts the mRMR feature selection technique, improving performance by 55% on application generation tasks

Projects

RoomCraft | Top 7 in MIT Web.Lab Full Stack competition

- Developed a website combining productivity with gamification, with a React.js/HTML/CSS frontend, Node.js/Express/MongoDB backend, and ReactQuill/OpenAI API. Utilized Figma to generate mockups.
- Utilized Object-Oriented Design in file/note-taking system, user profile/friending, and game-like user interface
- Placed in the top 7 teams out of 450+ MIT participants, earning an honorable mention and $750.

AutoManim | Full Stack Website with Prompt Engineering TreeHacks Project

- Built a MERN stack website in 36 hours to generate Manim animations and lessons given a user prompt
- Utilized Backus-Naur Form grammar/few-shot/other Large Language Model prompting tricks inspired by Grammar Prompting for Domain-Specific Language Generation with Large Language Models by Wang et al.
- Delivered working/relevant Manim animations using only 50 cents total of tokens throughout the entire hackathon

Synthetic Medical Data Generation | Computer Vision AI Research Project

- Researched the generation of synthetic medical images in Python using stable diffusion foundation models and Generative Adversarial Network on glaucoma images, improving Kernel Inception Distance by 53% from baseline using fine-tuning and prompting and model recall on glaucoma diagnosis on the JustRAIGs dataset by 2.5%.

Skills

Languages: Python, Javascript, C#, Java, HTML, CSS
Technologies: Git, Pytorch, CUDA, High Performance Computing, Linux, Numpy, Pandas, Node.js, MongoDB, React.js, Express.js, HTML, CSS, Tailwind CSS, Selenium, Beautiful Soup, prompt engineering

Awards and Accolades

2024 | **Citadel Women's Datathon 1st Place Winner** | 1st place out of 80+ invitees from 2000+ applications
2023 | **Atlas Fellow** | 1 of 100 students chosen from 13,000+ applications for "exceptional potential"
2022 | **Research Science Institute Scholar** | 1 of 93 selected, most prestigious high school research program
2023 | **Regeneron STS Scholar** | 1 of 300 selected, most prestigious research competition for highschoolers