Loc **Trinh**

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Experience

MIT Clinical Machine Learning Group | UG Researcher

08/2017 – Present | Cambridge, MA

- Applying semi-supervised learning methods to clinically phenotype 200K noisy electronic health records from Beth Israel Deaconess Medical Center (BIDMC).
- Working with ED clinicians from Harvard Medical School to develop robust human-in-the-loop algorithms to perform high-throughput patient phenotyping.
- Developing the to-be open-sourced learning framework currently being used at the Emergency Department within BIDMC.

Yelp | Software Engineer

05/2017 – Present | San Francisco, CA

- Worked on Yelp's restaurant ranking model and helped improve online traffic CTR near 1% for 30M daily restaurant queries.
- Helped improve Yelp's learning to rank framework by implementing time sensitive signals along with key personalization features.
- Helped improve Yelp's query understanding model using latest advances in recurrent neural network.

MIT Learning and Intelligent Systems | UG Researcher

07/2016 – 01/2017 | Cambridge, MA

- Explored heuristic search, suboptimal search, and anytime search algorithms to build motion planning and execution system.
- Applied supervised and reinforcement learning techniques to help robot learn basic primitive skills such as pushing a block or screwing on a bottle cap.

MIT EECS Department | Teaching Assistant

01/2015 – 05/2015 | Cambridge, MA

- Tutored and assisted MIT students in 6.01: Introduction to EECS on weekly design labs and software assignments.

Education

Massachusetts Institute of Technology

Expected Graduation: **2019** | GPA: 4.9

- S.B. in Computer Science and Engineering
- Minor in Mathematics
- M.Eng. in Computer Science

Relevant Coursework

Machine Learning

- 6.008 Inference Algorithms
- 6.819 Computer Vision
- 6.864 Natural Language Processing
- 6.867 Graduate Machine Learning
- 6.882 Bayesian Modeling and Inference
- 9.520 Statistical Learning Theory

CS/Mathematics

- 6.005 Software Engineering
- 6.006 Intro to Algorithms
- 6.046 Design & Analysis of Algorithms
- 18.06 Linear Algebra
- 18.200A Discrete Applied Mathematics
- 18.600 Probability & Random Variables

Personal Projects

battlecode | Java, Python

January 2017, 2018

- Programmed an AI agent to play a real-time strategy (RTS) game hosted by the MIT Battlecode competition against 500+ teams.
- Employed a suite of techniques and software practices like pathfinding, locating connected components, state systems for every units, danger maps, subsystems, try/catching, and more!
- Top 32 in January 2017 and Finalist in January 2018!

battleshipAI | Python - Probability & Graphics

Summer 2016

- Programmed 3 different bots to play the game Battleship with strategy ranging from complete randomness to maximum likelihood.
- Probabilistic approach yielded an average 44 moves made per board, ~50 moves improvement over complete randomness and ~15 moves improvement over classical playstyle.

racecar | C++, Python, ROS - Autonomous AI

Spring 2016

- Worked in a team to develop and program an RC racecar to self-drive in the MIT tunnels
- Ultilized advance sensors such as laser range finder, ZED stereo camara, structure 3D camera, and IMU to self-navigate.
- Implemented both full-scale SLAM approach and reactive approach.
- Won 2nd place in the final grand challenge.

langHelper | Web - MEAN stack & UI design

Summer 2015

- Designed an online learning web application that helps user learn the syntactic differences between programming languages, such as those between C++, C, Java, Python, Javascript, and more.
- Improved application functionalities with AJAX content, MongoDB query, and mobile responsiveness.

Skills & Interests

Data Science

- Python, numpy, pandas
- Pytorch, Tensorflow
- Apache Spark
- Java, JUnit, Git

Web Development

- HTML/CSS
- Django
- Node.js, SQL
- Adobe Photoshop

Activities

- Snowboarding
- Sailing
- Hiking & Camping
- Swimming

Leadership

Simmons Hall Officers | Tech Co-Chair 15-17

- Webmaster for dorm website and provided tech assistant for +350 residents within Simmons Hall.
- Co-designed the new Simmons DB.