Nathaniel Gordon

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Education

Northeastern University Boston, MA

Bachelor of Science in Computer Engineering and Computer Science *Aug. 2017 – May 2021*

- Notable Coursework: Artificial Intelligence, Machine Learning and Pattern Recognition, Mobile Robotics
- Club Involvement: Northeastern University IEEE chapter Treasurer
- Academic Honors: Dean's List, First Prize Northeastern University Engineering Cornerstone Competition
- GPA: 3.674/4.0

Experience

Lead Teaching Assistant, Discrete Structures Aug. 2018 – Present

Northeastern University, Khoury College of Computer and Information Science *Boston, MA*

- Lead and facilitate productive discussion of course material in weekly recitation periods
- Provide comprehensive assistance for students via office hours, pre-exam review sessions, and discussion forum
- Manage grading staff to ensure assignments and exams are graded promptly and equitably
- Collect information on how to improve the course and optimize instructor and TA efforts
- Transition class to online learning format amid pandemic circumstances

Autonomy Research Intern July 2019 – April 2020

Scientific Systems Company, Inc. *Woburn, MA*

- Spearheaded an internal effort to explore the use of bidding algorithms for multi-agent collaborative autonomy
- Collaborated with other groups to test experimental algorithms on ongoing projects
- Documented and analyzed results to produce a first-author manuscript pending release approval and publication
- Presented findings to peers and enabled coworkers to apply research results to future efforts

Projects

DraftToDeck | *Python* Oct. 2020 – Present

- Design and implement a program utilizing simulated annealing to construct an optimal Magic: The Gathering deck from a draft pool
- Iterate on utility function variations to best evaluate individual card effectiveness and deck synergy
- Apply pre-pruning methods to improve performance and solution quality
- Analyze results and compile into report documenting findings

vIRal Vision | *Python* July 2020 – Present

- Collaborate with a team of five peers to design a system to track conformity to social distancing guidelines
- Harness computer vision to deploy a body-tracking system to a group of Raspberry Pi's equipped with IR cameras
- Develop a suite of motion predictor algorithms to serve a variety of predictions to a ML model
- Create video- and text-based reports documenting the process and findings
  - Deliver report to Northeastern ECE department for consideration in the bi-yearly design contest
  - Submit co-authored report for publication in ISIAC-WAC

Technical Skills

Languages: Python, C/C++, Java, MATLAB
Developer Tools: Git, VS Code, Linux CLI, Eclipse, AWS
Libraries: NumPy, Matplotlib, OpenCV, OMPL, ROS