


Rishub Jain

rishub@cmu.edu | rishub.me | 703-868-6244 |  rishubjain |  rishubjain | U.S. Citizen

EDUCATION

Carnegie Mellon University

BS in **Computer Science**
Minor in **Machine Learning**
May 2018 | GPA: 3.97/4.0

Masters in **Machine Learning**
Expected **May 2019** | GPA: 4.0/4.0

Thomas Jefferson High
School for Science &
Technology (TJHSST)
June 2015 | GPA: 4.4/4.0

COURSEWORK

Graduate

- Machine Learning (PhD) [10-701]
 - Machine Learning (Masters) [10-601]
 - Deep Learning [10-707]
 - Deep Reinforcement Learning & Control (TA) [10-703]
 - Language Grounding to Vision & Control [10-808]
 - Convex Optimization [10-725][†]
 - Intermediate Statistics [36-705][†]
 - Data Analysis [10-718][†]
- ([†]: in progress)

Undergraduate

- Practical Data Science [15-388]
 - Artificial Intelligence [15-381]
 - Modern Regression [15-401]
 - Statistical Inference [36-226]
 - Matrix Algebra [21-241]
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- Parallel Computer Architecture and Programming [15-418]
 - Algorithm Design and Analysis [15-451]
 - Great Theoretical Ideas [15-251]
 - Computer Systems [15-213]
 - Parallel and Sequential Data Structures and Algorithms [15-210]
 - Functional Programming [15-150]
 - Complexity Theory [15-455]

SKILLS

Python • Java • C • C++

R • Matlab • Javascript • SML

Tensorflow • Keras • scikit-learn

Deep Learning • Computer Vision • NLP

EXPERIENCE

Uber ATG Prediction Intern | Summer 2018 | Pittsburgh, PA

- Leveraged active learning to analyze and improve models that predict object movement around an autonomous car

Apple Software Engineering Intern | Summer 2017 | Cupertino, CA

- Improved aspects of the chip design process using machine learning
- Developed automated ticket assignment system

CMU Research Assistant | Spring 2017 - Present | Pittsburgh, PA

- Generating text reports and classifying diseases given medical images
- Predicted future diseases given clinical records of patient
- Built new capabilities for Robot Soccer, including an RL model to chip-kick

Disney Research Research Asst. | Spring & Fall 2016 | Pittsburgh, PA

- Developed machine learning models to predict real-time engagement levels
- Built a tree-based conversational robot by learning to reuse dialog

Bloomberg LP Software Eng. Intern | Summer 2016 | New York, NY

- Developed platform for real-time client-side debugging

National Inst. of Health SWE Intern | Summer 2015 | Bethesda, MD

- Generated atomic resolution reconstructions of proteins using cryo-EM

U.S. Army Research Lab SWE Intern | Summer 2014 | Aberdeen, MD

- Developed a two-way converter between 3D geometry formats

NASA Software Eng. Intern | Summer 2013 | Goddard, MD

- Transformed the raw satellite images into usable and accurate formats

PUBLICATIONS

- J. Kennedy, I. Leite, A. Pereira, M. Sun, B. Li, **R. Jain**, R. Cheng, E. Pincus, E. Carter, and J. Lehman. **Learning and Reusing Dialog for Repeated Interactions with a Situated Social Agent**. In *Proceedings of the International Conference on Intelligent Virtual Agents*, 2017
- N. Sadoughi, A. Pereira, **R. Jain**, I. Leite, and J. Lehman. **Creating Prosodic Synchrony for a Robot Co-player in a Speech-controlled Game for Children**. In *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction*, 2017

PROJECTS

2018	Improving Single-GPU Performance for DQNs	15-418 Final Project
2017	Feature Flow for Frame Interpolation	10-707 Final Project
2017	Autonomous Object Translation from Language	10-808 Final Project
2017	Skill Trees for Hierarchical Reinforcement Learning	10-703 Final Project
2017	RL-based AI for Breakout and Tetris	15-381 Final Project
2016	Predicting and Analyzing Crime in Pittsburgh	15-388 Final Project
2016	Organic Compound Identifier using CV	AT&T Hackathon
2016	Real Time Pool Game Helper using CV	Build18
2015	Luggage Recognition using CV	Research Project

AWARDS

2018	2 nd Place at RoboCup 2018 in the Small Size robot soccer league
2017	Best Technical Paper in ACM/IEEE HRI 2017
2016	1 st Place in AT&T Mobile App Hackathon (OCalc)
2014	Eagle Scout Award
2013	1 st Place in Intern Presentation Contest at NASA Goddard