Riley Tallman

realleyriley.github.io/portfolio
rptallman@gmail.com
linkedin.com/in/rileytallman

EDUCATION

Arizona State University

- B.S. – Computer Science with Honors — 3.95 GPA
- M.S. – A.I. and Computer Vision, graduating Dec. 2020 — 3.78 GPA

SKILLS

Programming Languages	Python, C++, git, SQL, C, Java, MATLAB, clingo
Libraries	Keras, sklearn, ROS, OpenCV, pandas, numpy
Other	Computer Vision, Machine Learning, NLP, Scrum, AWS, Patents, Linux

EXPERIENCE

Systems Imagination
May – August 2019

Artificial Intelligence Intern – Tempe, AZ

- Led a team of four to improve hypergraph database algorithms with AI
- Used boosted decision trees and a data-driven approach to predict magnetic interactions within molecules using GPU acceleration

Teaching Assistant
August – December 2019

CSE471 Intro to Artificial Intelligence – Tempe, AZ

- Taught AI concepts like A* search and Bayes nets for 150+ students
- Assisted students with AI algorithm implementation in python

DriveTime
May – August 2018

Cyber Security Intern – Tempe, AZ

- Reduced inquiries by 10% after building a website to handle internal data loss
- Built automated security dashboards monitoring email & web filtering and anti-virus software with REST APIs and python
- Administered phishing security tests to 5,000+ employees

PROJECTS

Senior Capstone
January – December 2019

Autonomous Driving Hackathon (1st Place)

- Led a team of 5 and took 1st place by training a residual CNN to autonomously drive and recognize objects on an NVIDIA Jetson Nano and Sparkfun Robot

Honors Thesis
August – November 2019

Smartphone Computer Vision

- Improved accuracy by 600% after developing a novel algorithm to classify the orientation of an iPhone with computer vision in Swift

Visual Question Answering
February 2020 – Present

Stanford GQA (python)

- Improving VQA methods using state of the art Natural Language Processing and Computer Vision to outperform human performance

Computer Vision
October – December 2019

Edge Detection with Snakes (MATLAB)

- Implemented edge finding algorithms from Snakes: Active Contour Models (1988) to diagnose cardiovascular disease

Hash Table Dictionary
January – May 2018

Word Unscrambler (C++)

- Conglomerated 240k dictionary words into a hash table with collision resolution by chaining which yields linear access time (Big-O of 1)