Benjamin Danek

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Recent graduate with a broad set of experiences in machine learning, and software engineering. Inspired to benefit humanity by building exceptional software.

SKILLS & INTERESTS

- **Technology I Want to Contribute To**
  Quantum computation.
  Distributed, or serverless computation.
  Data Science (various areas).

- **Tool Set**
  Typescript, React, Figma, Python, Java, C++, C, Bash, MATLAB, LaTeX

EXPERIENCE

- **New Relic Inc.**
  Full Stack Software Engineering Intern - Phoenix, AZ
  Solved UI and backend bugs in legacy codebase, implemented novel features on the Synthetics product.
  Skills: React, Angular, Typescript, Java, PostgreSQL
  Summer 2020

- **Lam Research Corporation**
  Hardware Engineering Intern — Fremont, CA
  During 2018 Summer made dataset and implemented Deep Neural Network in component manufacturing process.
  During 2019 Summer designed a system for generating and collecting time series test data for predictive maintenance model.
  Skills: Python, Keras, OpenCV, ExpressPCB, Arduino
  Summer 2018, Summer 2019

- **Arizona State University**
  Undergraduate Research Assistant — Tempe, AZ
  Implemented gradient based optimization for generating a whitebox adversarial attack on a simple Deep Q Network RL agent.
  Skills: Python, OpenCV, Tensorflow, Academia
  Spring, Fall 2019

- **Stackend Solutions LLC**
  Computer Vision Subcontractor — Remote
  Video analysis for inventory management.
  Skills: Python, OpenCV
  Fall 2019

EDUCATION

- **B.S.Computer Science CGPA: 3.65/4.00**
  Arizona State University 2017-2021

- **Meaningful Courses**
  Data Structures and Algorithms
  Design Optimization
  Autonomous Exploration Systems
  Applied Computational Methods
  Multimedia Information Systems

  Advances in Robot Learning
  Foundations of Algorithms
  Semantic Web Mining
  Quantum Computation

PROJECTS

- **FURI Adversarial Attack on RL Agent**
  Implemented program for generating an adversarial perturbation which could make a simple RL agent perform a desired action within a discrete action space. Research project with Yi Ren at ASU.
  `http://designinformaticslab.github.io/`
  Python, Tensorflow, Numpy

- **DRIFT: Drone Research Integrated Fuzzing Tool**
  This project aimed to enable open source development of mission critical robotics software by doing automated bug discovery. Senior Capstone Group Project in partnership with Jnanseshwar Das at ASU.
  `https://github.com/DREAMS-lab/DRIFT`
  Travis CI, AWS, AFL

EXTRACURRICULAR

- **Arizona State University**
  Undergraduate TA — Tempe, AZ CSE 240 Introduction to Programming Languages *Spring-Fall 2019*

- **Chicanos Por La Causa Volunteer**
  FLL Coach — Phoenix, AZ Team #46178, Chicabots
  Fall 2019