

Benjamin P. Danek

2836 Colfax Avenue S Minneapolis, MN 55408, USA

Email: bdanek2@illinois.edu

Phone: +1 408 455 6822

<https://bpdanek.github.io>

Education

University of Illinois Urbana Champaign (UIUC)
Masters of Computer Science

Illinois, USA
Aug 2021 - present

Arizona State University (ASU)
B.S. in Computer Science
3.8/4.0 Major GPA

Arizona, USA
Aug 2017 - May 2021

Research Interests

I am interested in machine learning systems, and frameworks in a clinical, healthcare, biomedical, pharmaceutical setting.

I am also an open source developer working on the PyHealth package.

Work History

New Relic Inc.
Software Engineering, Error Tracking Product
Full Stack engineer on the Errors Inbox product team.

San Francisco, CA USA
Jun 2021 - Aug 2022
Minneapolis, MN USA
Aug 2022 - present

Maintain system distilling petabytes of observability metrics to provide customer observability into their applications.

- Own feature design, and implementation
- Own Infrastructure decisions and scalability
- Own product SLAs with on call rotation
- Lead as a sprint planner, feature lead, and mentor to colleagues

(Java, Typescript, React, Apache Kafka, GraphQL)

Internships

New Relic Inc.

Remote, USA

Software Engineering Intern, Synthetics Product

May 2020 - Aug 2020

Using docker containers, the synthetics product mimics web traffic around the world.

- Develop internal tooling for managing customer shard distribution
- Resolve Customer UI and Backend bugs
- React, Typescript, Java, Docker, Selenium, Bash

Lam Research Corporation

Fremont, California USA

Hardware Engineering Intern, ALTUS Product Family

June 2019 - Aug 2019

- Time series vibrational analysis to prototype predictive maintenance in semiconductor manufacturing. equipment.
- (Python, Keras, PCB Design, Arduino)

Lam Research Corporation

Fremont, California USA

Hardware Engineering Intern, ALTUS Product Family

June 2018 - Aug 2018

- Using Deep Computer Vision (AlexNet), produced a system which could be used to automatically classify malformed semiconductor manufacturing components.
- (Python, Tensorflow, OpenCV3, Numpy, Scipy)

Metralight Inc.

Liberecký kraj, Czech Republic

Hardware Design Intern

June 2017 - Aug 2017

Develop rudimentary automated QA equipment for PCB Manufacturing line. (CNC Mill, SolidEdge)

Selected Projects

Anto, Pesticide Screener

Project Lead

Developed a pesticide screening software system that processes a corpus of pesticide usage reports submitted to the state of California, populates a SQL database with the report contents, and provides a UI for approximating an individual's pesticide exposure based on their geography.

(Google Cloud Platform, Postgres, Python, Typescript, React, NodeJS)

Personal, USA
Palo Alto, CA USA
Dec 2021

DRIFT, Computer Science Capstone Project [[github](#)]

Project co-lead, with Z. Basque, W. Al-Zahir, N. Smith

Co-lead of a Continuous Integration tool used for automated vulnerability detection on the PX4 open-source flight controller using Google AFL. This work allows faster, safer open source external contributions to the PX4 project. Work done in partnership with Dr. Jnaneshwar Das' Distributed Robotics Exploration and Mapping Systems Lab (DREAMS).

(Amazon Web Services, Python, Javascript, React, Bash)

Tempe, AZ USA
May 2020 - Dec 2020

Adversarial Examples in end-to-end Reinforcement Learning Controllers, Fulton Undergraduate Research Initiative (FURI)

Lead with Associate Professor Yi Ren

In this work we investigated characterizing the abilities of adversarial perturbations embedded in the agent environment. The RL agent is an end-to-end controller implemented with Deep Q-Learning. Results of the project indicated that the end-to-end controllers could be manipulated using adversarial perturbations.

Tempe, AZ USA
Jan 2019 - Dec 2019

Awards and Achievements

- Dean's List 2017 Fall, 2018 Spring, 2019 Spring, 2019 Fall
- ASU Academic Achievement Scholar Aug 2017 - May 2021
- Golden State Award Aug 2017 - May 2021
- ASU Summer 2020 Award May 2020 - Aug 2020
- Fulton Undergraduate Research Initiative (FURI) Jan 2019 - December 2019

Volunteering

- Say No to Alcohol Group (snTAG) Minnesota Chapter co-founder Minneapolis, MN USA
- FIRST Lego League Coach, Chicanos Por La Causa Phoenix, AZ USA
- Animal Assisted Happiness, Sunnyvale, CA USA