# Harry **Eldridge**

eldridgemharry@gmail.com | Arlington, VA | harryeldridge.com

## Education

**Johns Hopkins University** — *Baltimore, MD*

PhD in Computer Science — *2021 - 2026 (expected)*

**Georgetown University** — *Washington, DC*

M.S. in Computer Science — *September 2017 – May 2018*

GPA: 4.0

BS in Computer Science, Minor: Mathematics — *September 2013 – May 2017*

GPA: 3.8

## Experience

**Appian Corporation** — *Tysons Corner, VA*

Security Engineer — *August 2018 – January 2020*

- Designed a system using AWS Lambda and Google Chat to verify with Domain Administrators that actions taken on highly privileged accounts were deliberate
- Maintained a log aggregation and alerting system of all Windows Event Logs for a 1000 employee company using Apache NiFi, AWS S3, AWS Athena, and AWS Lambda
- Deployed and managed a self-hosted GitLab installation with autoscaling runners, using AWS EC2, Terraform, and Ansible
- Using Terraform, designed and deployed an AWS Security Suite (Guardduty, Cloudtrail, Detective) for an AWS organization supporting over 500 engineers, and over 1000 customer sites
- Designed and deployed a method to automate AWS AMI scanning using Tenable.io, Python, and Terraform

**Georgetown University, Computer Science Department** — *Washington, DC*

Research Assistant, Professor Adam O'Neill — *May 2018 – August 2018*

- Researched instantiating random oracles in the Fujisaki-Okamoto encryption scheme using extractable hash functions

Research Assistant, Professors Adam O'Neill and Micah Sherr — *May 2016 – May 2017*

- Analyzed the potential application of homomorphic hash functions to digital signatures

Teaching Assistannt, Algorithms for NLP, Professor Nathan Schneider — *September 2017 - December 2017*

- Designed assignments, graded submissions, and let review sessions for a computational liguistics course of 15 students

Research Assistant, Professor Richard Squier — *September 2016 - September 2017*

- Used Raspberry pis, FGPAs, Electric, and Verilog to perform hardware simulations while advising 70 students in a hands-on lab environment
- Designed the lesson plan for an undergraduate hardware course

Teaching Assistant, Professors W. Addison Woods and Jeremy Bolton — *September 2015 - May 2016*

- Advised students, graded asignments, and held review sessions for an introductory programming course.

**Georgetown University, McDonough School of Business** — *Washington, DC*

Research Assistant, Professor Christopher Hydock — *August 2014 – September 2016*

- Using Python produced a Twitter scraping software application to collect data on branded Twitter account for engagement analysis

## Notable Projects

- Built a web aplication that takes two images and generates an image of one "morphing" into the other, using Python, Django, NumPy, and Pillow: https://animorphs.crooked-ticket.com
- Built a web application for uploading, searching, and sharing photos, using Python, Django, and Postgres: https://github.com/heldridge/photos-webapp
- Using Python produced a Twitter scraping software application to collect data on branded Twitter accounts for engagement analysis
- Developed a novel system for location inference on Twitter using textual features, achieving perfectly accurate loaction prediction for 25% of accounts
- Used Python, pandas, NumPy, and scikit-learn to produce a series of machine learning models that estimate the fluency of English sentences from n-gram features: https://github.com/heldridge/fluencyPrediction