

EDUCATION

- **University of Texas at Austin** Austin, TX
Bachelor of Science in Computer Science *Aug. 2017 – May 2021*
Coursework: Data Structures, Computer Architecture, Software Engineering, Operating Systems, Network Security
- **KTH Royal Institute of Technology** Stockholm, Sweden
Study Abroad *Jan. 2020 – May 2020*
Coursework: IT Design for Disability, Search Engines and IR Systems, Haptics, Tactile and Tangible Interactions

EXPERIENCE

- **Microsoft** Redmond, WA
Software Engineer *Aug. 2021 – Present*
 - Designed and developed a CLI tool that enables developers to digitally sign Docker/OCI images using Azure's Code Signing service (currently in private preview), enabling a huge potential market for Azure's Code signing service.
 - Designed and implemented changes to an ASP.NET API in order to enable routing of traffic to a new service. This enabled our team to migrate much of our infrastructure from a physical on-prem environment to Azure.
 - Took ownership of a monolithic legacy codebase from another team and rapidly came up to speed on it in order to meet an urgent deadline. This involved leading communications across multiple teams in order to understand the architecture of the new service.
 - Used Change Feed feature of Azure's Cosmos DB to provide a persistent record of activity in a team service and keep multiple regional databases in sync with one another.
- **Microsoft** Remote
Software Engineering Intern *May 2020 – Aug. 2020*
 - Learned fundamental concepts about digital signatures, asymmetric encryption, digital certificates, and public key infrastructures.
 - Built a command-line application in C# to extract signature metadata from digitally signed files.
- **State Street Corporation** Austin, TX
Cloud Security Intern *Jun. 20219 – Aug. 2019*
 - Used Burp Suite to discover multiple vulnerabilities in existing services and built programs to exploit them.
 - Created an automated security testing suite that scanned for vulnerabilities in open ports and source code using ReactJS and Flask.
 - Built a tool that would monitor network traffic and report unencrypted data using Python and Scapy.

PROJECTS

- **NYT Crossword Search Engine**
 - Wrote Python script to scrape and aggregate my personal NYT crossword data, implementing multithreading to complete 1000+ web requests 7.5x faster than synchronous Python performance.
 - Used Javascript to build an inverted index, mapping crossword clues, answers, and dates to crosswords that they are associated with.
 - Used NextJS to create an API that allows performant querying of the inverted index, and a React frontend that allows users to query the crossword data across multiple fields.

PROGRAMMING SKILLS

- **Programming:** Javascript, Python, C#, Java, SQL
- **Web Development:** HTML/CSS, ReactJS, NodeJS, NextJS, Express, SCSS, Flask, TypeScript
- **Technologies:** AWS, Azure, GCP, Burp Suite, Git, Heroku, Burp Suite