

EDUCATION

- **University of Virginia (2019 - 2023)** 3.98 / 4.00
 - B.S. Computer Science (Expected May 2023)
 - B.A. Economics (Expected May 2023)
- **Oakton High School (2015 - 2019)** 4.60 / 4.00

EXPERIENCE

- **Research Assistant / University of Virginia / Charlottesville, VA** August 2020 - Present
 - Designed and developed secure and usable Voice Personal Assistant software that improves privacy controls on current industry standards like Amazon Alexa
 - Explored security and privacy vulnerabilities in Voice Personal Assistants to publish in research
- **Data Science Intern / JHU Applied Physics Laboratory / Laurel, MD** June 2020 - August 2020
 - Developed MySQL database for unified access to COVID-19 data from multiple sources to aid the JHU APL's COVID-19 modeling effort
 - Proposed and led a COVID-10 sentiment analysis project to examine public opinion shifts in specific areas like mask-wearing and shutdowns and how it may affect or be affected by state-level public policy
 - Presented results to a team of engineers across the APL network and work was scouted for further implementation with the APL's ESSENCE health surveillance tool
- **Intern / Lepton Global / Vienna, VA** May 2019 - August 2019
 - Developed SQL databases and front-end software in MS Access to log network activity and outages
 - Built a custom desktop application to create, archive, and synchronize customer quotes and sales across company computers
 - Communicated with business partners and government agencies to secure procurement and service contracts

EXTRACURRICULARS

- **Competitor / UVA Moot Court** Sept 2019 - Present
 - Wrote and argued complex Constitutional law cases to panels of judges
 - Only team from UVA to break into the round of 16 at Liberty University 2019
- **Team Captain / Team America Rocketry Challenge** Sept 2016 - June 2019
 - Led school rocketry team in designing, building, and flying model rockets up to 1000 ft. while carrying electronics
 - Placed 14th in national rocketry competition finals

PROJECTS

- **ctaff + rizumu**
 - ctaff: Developed algorithms to detect rhythm and beats in music using Fourier transforms and audio signal processing
 - rizumu: Built a fully-featured cross-platform rhythm game using ctaff that allows automatic generation of beat maps for any song
- **Pystation**
 - Built a public internet radio station and lightweight DJ software using the Shout protocol
 - Features cross-platform usability and powerful controls for DJs, including a 24/7 offline bot streamer
- **Toxical**
 - Trained a neural network to automatically detect and moderate online conversations on platforms like Twitter and Discord
 - Developed a custom sentiment analysis algorithm that detects toxic comments with 80% accuracy

PROGRAMMING SKILLS

- **Python, Java, C/C++, HTML/CSS, JavaScript, SQL, TensorFlow, Git**