

## EMILY BUERK

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Github: <https://github.com/emilybuerk>

## EDUCATION

**UNIVERSITY OF VIRGINIA, School of Engineering and Applied Science**  
*BS Computer Science and Systems Engineering*

**Charlottesville, VA**  
**2023**

- **Major GPA: 4.0**, Cumulative GPA: 3.7 – Dean's List, Rodman Scholar (selected among top 5% of class)
- **Awards:** Sky Alland Scholar, Intel SWE Scholar, Rodman Scholar, Grace Hopper, Clark-Rodman Scholar, Thomas Young Scholar, AXA Achievement Scholar, Github Student Developer, Microsoft Beta Student Ambassador

## EXPERIENCE

**DELOITTE CONSULTING LLP**

**Consulting Summer Scholar, Artificial Intelligence & Data**

**Arlington, VA**  
**Summer 2022**

- Designed Figma wireframes and performed data analytics and cleansing with Tableau to predict and display client information
- Attended AI and metaverse conferences to contribute to futuristic new technological models for Government and Public Services

**INTEL CORPORATION**

**Design Automation Engineering Intern**

**Folsom, CA**  
**Jan 2021–July 2021**

- Improved software applications using agile design to promote collaboration between employees designing Optane SSDs at Intel
- Utilized Linux, Perl, and PHP to manage server storage for NAND and Optane departments
- Created GUIs and scripts using Python, Perl, and C++ to streamline and automate tasks completed by Design Engineers

**RESEARCHER, UNIVERSITY OF VIRGINIA**

**Research Intern**

**Charlottesville, VA**  
**May 2020–Feb 2021**

- Developed machine learning algorithms with TensorFlow for black-box adversarial attacks on ML image classification
- Led research team in improving state of the art adversarial defenses using hybrid black-box attacks

**ENVISION EMPOWERMENT INC**

**Founder**

**Charlottesville, VA**  
**Jan 2020–Feb 2021**

- Started a nonprofit dedicated to empowering people in poverty by linking them to available resources based on eligibility
- Created website using WordPress framework to make survey matching eligible people in need to available charitable resources
- Partnered with United Way of Charlottesville to build and release their website [reimaginecva.org](https://reimaginecva.org)
- Performed data analytics on a publicly available dataset of nonprofits to clearly and correctly compile updated information

**QOOLEY**

**UI/UX Intern**

**Chicago, IL**  
**Spring 2019**

- Partnered with Swift developers to make UI/UX improvements to iOS application
- Attended conferences on startup culture and data science research trends

**HACK RIDGE INCORPORATED**

**Director of Operations**

**Park Ridge, IL**  
**2017–2019**

- Constructed two 24-hour annual hackathons sponsored by major corporations for over 500 students in Chicago
- Managed \$6,000 budget and teams of event organizers to expand outreach to minorities in STEM

## LEADERSHIP EXPERIENCE AND ACTIVITIES

**GIRLS WHO CODE, University of Virginia**

**President, Director of Hackathon, Founder**

**Charlottesville, VA**  
**2019–Present**

- Gathered over \$40,000 sponsorship budget from 20 major corporations by managing a team of over 50 executive and staff members
- Constructed two 48 hour coding events for over 500 participants by leading over 30 workshops to distribute over \$20,000 in prizes
- Constructed Girls Who Code Career Fair for over 250 participants by recruiting 18 corporate sponsors listed on [gwcuva.com](https://gwcuva.com)

**RODMAN COUNCIL, University of Virginia**

**Class Representative**

**Charlottesville, VA**  
**2019–Present**

- Manage semesterly budget to coordinate 4 yearly events and encourage program representation
- Increase Rodman honors program spirit by revamping merchandise for scholars program

## SKILLS

- **Programming and Software Engineering:** Java, Python, Tkinter GUIs, Perl, PHP, C/C++, Swift, Javascript, HTML/CSS, Sails.js, React with Redux, MySQL, Agile Methodology, Scrum, Github, Linux, Unix, IDE, xv6
- **Machine Learning:** TensorFlow, Keras, Microsoft Azure, Theory, Algorithms
- **Data Analysis Skills:** MatLab, Microsoft Office, Excel, Data Structures and Algorithms, Data Science
- **Cybersecurity:** John the Ripper, MetaSploit, iptables, nmap, Snort, LAN, WAN, routing, Computer Architecture, Operating Systems
- **Other Skills and Interests:** Project Management, Creative Conceptualization, Web Design, Human Computer Interaction, Technical Communication, Software Development, Decision Modeling, Project Management, Engineering Business