# James E. Roberts, Jr.

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## EDUCATION

#### The Pennsylvania State University

State College, PA

Bachelor of Science (B.S.), Computer Science

Aug 2022 - May 2026

- Major GPA: 4.0/4.0
- Relevant Coursework: Introduction to Programming Techniques, Intermediate Programming
- Member: Institute of Electrical and Electronics Engineers (IEEE), Association for Computing Machinery (ACM)

#### Liberty University Online Academy (Dual Enrollment)

New York City, NY

High School Diploma

2017 - 2021

- GPA: 4.0/4.0
- Relevant Coursework: Coding Fundamentals in Python (partnership with Amazon), Computer Literacy
- Member: National Honor Society and Astoria Music Studio: Pianist and Violinist
- Honors: Principal's List, ACSI Math Olympics (top 1% of 400+ contenders), ACSI Spelling Bee (top 3% of 500+ contenders), ACSI Creative Writing Competition (top 5% of 1000+ contenders), Science Fair Top Project 2017

#### Experience

### Photograph Developer

Sep 2016 – Jun 2020

Yearbook Committee, Evangel High School

New York City, NY

- Captured and preserved imagery of school events, people, and activities.
- Edited and processed photos using Adobe Photoshop and Adobe Lightroom.
- Collarborated with other members of the yearbook committee to create a cohesive yearbook.

#### Projects

#### **Dotfiles Automation** | Bash, Unix, Git

Sep 2022 – Present

- Developed a script to automate the installation of configuration dotfiles on a new system.
- Utilized Git to clone the dotfiles repository and used the Bash shell to install dotfiles and execute symlinks.

# <u>Unit Converter</u> $\mid C++, Git$

Jun 2022 - Present

- Developed a command-line tool using C++ for converting temperature and speed units, reducing time spent manually researching conversions by 80%.
- Acquired and embedded formulas for unit conversions using functions and the math library.
- Utilized Git for version control and GitHub for remote storage, allowing new conversions to be added over time without disrupting the functional executable.

#### Character and Word Counter | C++, Git

Jun 2022 – Present

- Developed a C++ program to determine string lengths and word counts of user input through the terminal, increasing length testing efficiency by 80%.
- Used the standard library to allow C++ to understand and operate on user input effectively.
- Managed the project using Git for version control and GitHub for remote storage.

#### Geometric Calculator $\mid C++, Git$

Jun 2022 - Present

- Created a C++ program to perform geometric calculations as a command-line interface, reducing the time needed to access and calculate via a GUI by 75%.
- Utilized do/while loops to allow the user to perform multiple calculations without having to restart the program.
- Utilized GitHub for version control.

# Organizations

ACM - Penn State Association of Computing Machinery

Dec 2022 – Present

IEEE - Institute of Electrical and Electronic Engineers, Penn State Chapter

Dec 2022 - Present

Sep 2016 – Jun 2020

Astoria Music Studio: Classical Musician

Sep 2007 – Jun 2018

#### TECHNICAL SKILLS

National Honor Society

Languages: C/C++/C#, JavaScript, HTML/CSS, Python, Swift, LaTeX, Bash

Developer Tools: Git, GitHub, GitKraken, VS Code, Visual Studio, JetBrains Toolbox, XCode, Unix, AlfredApp