

James E. Roberts, Jr.

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EDUCATION

The Pennsylvania State University

State College, PA

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

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.
- Collaborated 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.

Unit Converter | *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 cmath mathematics 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 | *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.

ORGANIZATIONS

Nittany Data Labs - Penn State Data Science Association

Dec 2022 – Present

ACM - Penn State Association of Computing Machinery

Dec 2022 – Present

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

Dec 2022 – Present

National Honor Society

Sep 2016 – Jun 2020

Astoria Music Studio: Classical Musician

Sep 2007 – Jun 2018

TECHNICAL SKILLS

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

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