

## OBJECTIVE

Innovative and detail-oriented Computer Science student at Johns Hopkins University seeking opportunities to apply software and systems engineering skills to data driven, sustainable technology projects. Passionate about combining programming, modeling, and system-level thinking to support energy efficient and automation focus innovation.

## EDUCATION

### Johns Hopkins University

Baltimore, Md

*Bachelor of Science in Computer Science*

Expected May 2027

- **Technical Coursework:** Data Structures, Algorithms, Computer Systems Fundamentals, Artificial Intelligence, Machine Learning, Deep Learning
- **Mathematical Coursework:** Linear Algebra, Probability and Statistics, Calculus

## TECHINICAL SKILLS AND TOOLS

**Languages:** Python, Java, C/C++, Matlab, HTML/CSS, x86 Assembly

**Machine Learning & Data Science:** PyTorch, NumPy, TensorFlow, Matplotlib, Google Colab

**Robotics & Autonomous Systems:** ROS (Robot Operating System), Rviz, Jackal UGV Platform

**Software Development Tools:** Git, VS Code, Android Studio, Firebase, Linux/UNIX

**APIs and General Tools:** REST APIs, Microsoft Office Suite

## PROJECTS

### Deep Learning U-Net Segmentation & Data Pipeline Development | Johns Hopkins University

- Developed a structured data processing pipeline for medical image segmentation, including preprocessing, augmentation, and validation steps
- Built and trained a U-Net model, organizing project tasks across model design, data transformation, and performative evaluation
- Created documentation explaining preprocessing logic, hyperparameter decisions, and results for review and evaluation

### Android Educational Game – Ecological Simulation | Johns Hopkins University

- Collaborated on the development of an educational simulation app, contributing to data flow logic and event-driven interactions within the game environment
- Worked through iterative testing cycles and communicated findings to teammates to maintain system reliability
- Applied modular design and version control to support collaborative development and maintain clear documentation

### 3D Registration Pipeline with ICP Optimization | Johns Hopkins University

- Designed and implemented end-to-end 3D registration system from raw tracker data to align CT coordinates
- Implemented robust geometric computation modules: point-cloud registration, mesh proximity search, and iterative transformation refinement
- Optimized ICP algorithm with convergence criteria, achieving 20% improvement over baseline registration methods
- Engineered validation task with unit test, error metrics, and performance analysis to ensure clinical-grade reliability

## LEADERSHIP

### Chair of Women in Computer Science

Baltimore, Md

Johns Hopkins University Women in Computer Science

May 2025 - Present

- Lead a 6-member executive board to plan, coordinate, and execute technical workshops, mentorship programs, and networking events for 100+ students
- Conduct needs assessments to design high-impact programming, applying analytical thinking to improve engagement and community outcomes
- Manage partnerships with corporate sponsors and campus organizations, ensuring clear communication, expectation alignment, and timely delivery

## EXPERIENCE

### Resident Advisor

Baltimore, Md

Johns Hopkins University

August 2024 - Present

- Coordinate community-building initiatives and manage logistics for a residential community of 50+ students
- Serve as the primary liaison between residents and university leadership, identifying risks, resolving issues, and implementing timely action plans
- Apply clear communication and situational analysis to support student well-being and maintain a safe, inclusive environment