Akshaya Ajith

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Security Clearance: Secret (Pending Adjudication, expected Oct 2025)

Education

Johns Hopkins University **Expected May 2027**
B.S. Computer Science, Materials Science & Engineering GPA: 3.9 *Baltimore, MD*

Relevant Coursework

- Machine Learning
- Computer Systems Fundamentals
- Physics I & II
- Intermediate Programming in C/C++
- Electronic Properties
- Structures of Materials
- Linear Algebra
- Calculus III

Experience

Skydda.ai **Jul 2025 – Present**
AI & Data Engineering Intern *Seattle, WA*

- Designed and implemented a **Model Context Protocol (MCP) Server** to integrate and test **RESTful API endpoints**, supporting **agentic AI** to improve data reliability.
- Reduced manual testing time by 80–90% through development of **ETL-style pipelines** that improved data accuracy and system reliability.
- Deployed scalable services on AWS/Docker, supporting high-volume queries.
- Contributed in an agile, cross-functional team through design discussions, code reviews, and pair programming.

Entropy for Energy (S4E) Lab, Johns Hopkins **Oct 2023 – Present**
Undergraduate Researcher *Baltimore, MD*

- Awarded **IDIES Summer Fellowship** for AI-driven accelerated discovery of high-entropy fuel cell catalysts.
- Developed and optimized **statistical & machine learning models** (Random Forest, GNNs) in scikit-learn and PyTorch, to predict stability of **high entropy alloys** improving accuracy by 30% and reducing MAE by 85%.
- Engineered ETL data pipelines in Python/C++ to process large datasets (JSON) from **VASP calculations**, cutting manual workload by 40%.
- Visualized complex datasets using Python (**matplotlib, seaborn**) to communicate results effectively to technical and non-technical audiences.

Department of Physics, Johns Hopkins **Jan 2025 – Present**
Course Assistant, Physics II: E & M *Baltimore, MD*

- Facilitated physics problem-solving for 100+ students, reinforcing fundamentals of **electricity & magnetism**.
- Prepared labs, organized equipment, and supported seamless class operations in an applied physics context.

Projects

Hopkins Student Wind Energy Team – Siting Team | Python, Furow, GIS, ArcGIS, seaborn

- Automated **GIS workflows** (Furow, ArcGIS) to improve siting decisions with data-driven analysis.
- Applied Python and statistical methods to process environmental datasets to ensure **infrastructure feasibility**.
- Created visualizations with seaborn to communicate results effectively to both technical and non-technical stakeholders.

Blue Jay Racing (BAJA) – Data Acquisitions Team | Python, C, C++, Raspberry Pi, seaborn

- Engineered **real-time data acquisition** for vehicle telemetry using C, improving sensor accuracy by 20%
- Optimized **low-level C** code for force and speed analysis, enhancing vehicle performance insight
- Integrated real-time data logging with visualizations via seaborn, reducing errors in force/speed calculations by 30%..

JJ Innovative Materials - Materials Testing | Python, Excel

- Developed material prototypes for organic substitutes of drywall and concrete.
- Utilized Excel to document material properties & conduct data analysis on crystallization.

Technical Skills

Languages: Java, Python, C, C++, GoLang, Bash, MATLAB
Materials Characterization: X-Ray Diffraction (XRD), Optical Microscopy, Scanning Electron Microscopy (SEM), ATR-FTIR, Tensile Testing
AI & Data Tools: SQL, ETL Pipelines, PyTorch, scikit-learn, Pandas, NumPy, Jupyter, matplotlib, seaborn
Familiar with ATSM Standards, CAD software (SolidWorks, Onshape), Ansys Granta, Microsoft Office, Google Workspace