

Student Name

Philadelphia, PA abc123@drexel.edu 215 XXX-XXXX linkedin.com/in/student github.com/Stu

Education

Drexel University

*Bachelor of Science in **Physics***

Concentration in Astrophysics, Minors in Mathematics and Computer Science

Philadelphia, PA

Anticipated Graduation: June 2028

GPA: 3.xx

Skills

Frameworks & Tools: MATLAB, LabVIEW, Mendeley, Linux, Simulink, COMSOL Multiphysics, Git / GitHub, Docker, Google Gemini API, OpenAI API, Catia, AutoCAD, Fusion 360

Programming & Other Languages: Python, C/C++, JavaScript, Fortran, MySQL, TypeScript, Bash Scripting

Experience

Astrophysics Research

Researcher

Drexel University, PA

March 2025 - Present

- Streamlined the quasar spectral classification program **using Machine Learning model (Independent Component Analysis)** on Thousands of spectra from Chandra Space Telescope, SDSS, and IUE Space Telescope
- Accurately processed data by **optimizing mathematical and statistical methods** like n-dimensional matrix analysis and Optimized data analysis pipelines using approximations which sped up the runtime by **42.7 seconds**
- Documented, Processed and Contributed to the development of a unified Script to in collaboration with researchers at the University of North Texas

Biophysics Research

Research Aide & Students Tackling Advanced Research (STAR)

Drexel University, PA

January 2025 - September 2025

- Automated all Data Handling and recording techniques by developing custom setup control and data acquisition software in **LabVIEW and C**
- Operated **optical and electrical instruments** to study the rate of polymerization and periodic behavior of Sickie Hemoglobin Polymers with 10^{-4} **optical density accuracy** with 6 other researchers
- Coordinated experimental design, data analysis, and interpretation, handled more than 8 Terabytes of data and presented findings at the STAR Research Showcase, communicating complex results to a multidisciplinary audience

Projects

Planetarium Software

github.com/Student_Name/Planetarium

- **Created a new Math model (Base 12 Numbers)** for Planetarium software, **increasing solid angle accuracy by $5.1 \times 10^{-6}sr$** by using J2000 Epoch based orbital computations and solving **differential equations through Euler's methods and numerical Stochastic Calculus** using NumPy, SciPy and AstroPy

Custom CFD Simulation Software

github.com/Student_Name/Aero Optimization CFD

- Developed a **Computational Fluid Dynamics software in Python and Fortran** (Fortran's custom arrays for efficiency) using Navier-Stokes to analyze and optimize lift and drag of CAD models, **specifically for airfoil models**

Orbit Simulation Software

github.com/Student_Name/Orbit Sim

- Modeled a **new time stepping scheme** for a Python and Matplotlib based orbital simulation program, achieved 97% accuracy in satellite trajectory calculations by integrating real two line elements

Organizations

Society of Physics Students (Leadership: Treasurer) (SPS) — American Astronomical Society (AAS) — Formula Society of Automotive Engineers (FSAE) — Aero Society of Automotive Engineers (AeroSAE)

Relevant Coursework

Calculus 1, 2, 3 — Differential Equations — Probability and Statistics 1, 2 — Contemporary Physics 1, 2, 3 — Computer Programming 1, 2 — Linear Algebra — Computational Physics — Thermodynamics

Honors & Awards

ASURS Scholar, Drexel University

STAR Scholar, Drexel University

Dean's List

March 2025 - Present

July 2025 - September 2025

September 2024 - January 2026