Benjamin Knobloch

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LinkedIn **GitHub**

EDUCATION

Stevens Institute of Technology | Hoboken, NJ
Bachelor of Engineering in Software Engineering — Expected May 2025
GPA: 4.00 / 4.00 | **Awards:** Tau Beta Pi, Dean's List (4/4), Edwin A. Stevens Scholar, Presidential Scholar, Pinnacle Scholar
Select Coursework Through Spring 2024: Agile Software Dev., Modeling & Simulation, Software Req. Anal. & Eng., Eng. Economics & Project Management, Database Management Systems, Data Structures & Algorithms, Discrete Mathematics

RESEARCH EXPERIENCE

Stevens Institute of Technology / JetBrains Research | Hoboken, NJ
Pinnacle Scholar Summer Research Assistant — May 2023 – August 2023

- Extended the functionality of AntiCopyPaster, an automatic refactoring tool for the IntelliJ IDE, by writing hundreds of lines of code to extend its user interface and configurability and improve internationalization
- Implemented a regular background data collection feature for the plugin that tracks several key usage metrics

Rabinovitch Research Group | Hoboken, NJ
Pinnacle Scholar Summer Research Assistant — May 2022 – March 2023

- Implemented Python image analysis on 10 terabytes of high-resolution Mercury images from the MESSENGER spacecraft to identify regions of its surface with optimal properties for a future rover landing from low-resolution global images
- Designed and built an intuitive GUI selection tool utilizing Python and the Tkinter toolkit for use by fellow and future research assistants to efficiently classify Mercury's regions by properties including impact density and mean impact size

Stevens Institute of Technology Research | Hoboken, NJ
Research Assistant — Jun 2022 – Nov 2022

- Conducted data analysis and algorithmic optimization on Stevens' admissions data by implementing in Python a stochastic gradient descent (SGD) algorithm intended for use in large, tightly constrained models
- Carried out data visualization work in Python and utilized the NumPy and Pandas libraries to employ and analyze performance of the SGD algorithm, ultimately improving performance by several orders of magnitude

WORK EXPERIENCE

Stevens Academic Support Center | Hoboken, NJ
Tutor — Nov 2022 – Present

- Deliver up to 10 hours a week of instruction to dozens of undergraduates in calculus, programming, and engineering
- Advance command and communication of complex subject matter through ongoing learning, resulting in deeper understanding and higher academic performance for tutees

The Stute | Hoboken, NJ
News Editor / Staff Writer of student-run newspaper — Sep 2021 – Present

- Guide and advise 6 to 12 news writers and perform high-level editing on the paper's largest section each week
- Research, write, and revise news stories and features, totaling over 40 published articles

Commvault | Tinton Falls, NJ
Software Developer Mentorship — Feb 2021 – Jun 2021

- Developed software tools using Commvault protocols (Workflows, Custom Reports) and general languages (Java, SQL, XML) to isolate and correct hundreds of instances of corrupted data in internal databases

SKILLS

Software: GitHub, VS Code, MATLAB, Simulink, Autodesk Inventor, SOLIDWORKS, GIMP, MS Office (Word, Excel, PowerPoint)
Languages: Python (w/ Pandas, NumPy, Gurobi Optimization, Tkinter), Java, C#, C++, JavaScript, HTML, CSS, SQL

LEADERSHIP EXPERIENCE

Engineers Without Borders, SIT Chapter | Hoboken, NJ
Vice President — Sep 2023 – Present

- Contribute to water access for the rural Q'eros community of Chua Chua, Peru by managing club operations and events, directing the operations of chapter committees, and running the website and newsletter

Secretary — Dec 2022 – Sep 2023

Stevens Honor Board | Hoboken, NJ
Recording Secretary — Mar 2022 – Present

- Record and maintain detailed records for all Honor Board meetings, Executive Board conferences, and student hearings
- Serve on investigative committees in leadership roles to strictly enforce the University's academic protection policies