

# Benjamin Knobloch

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[LinkedIn](#)



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## EDUCATION

**Stevens Institute of Technology** | Hoboken, NJ

Bachelor of Engineering in Software Engineering

Expected May 2025

**GPA: 4.00 / 4.00** | **Awards:** Dean's List (3/3 semesters), Edwin A. Stevens Scholar, Presidential Scholar, Pinnacle Scholar, 2022 School of Arts and Letters Creative Writing Competition - 1<sup>st</sup> Place

**Select Coursework Through Spring 2023:** Individual Software Engineering, Object-Oriented Software Engineering, Discrete Mathematics, Differential Equations, Design of Dynamical Systems, Field Sustainable Systems and Sensors

## RESEARCH EXPERIENCE

**Stevens Institute of Technology Research** | Hoboken, NJ

Research Assistant

Jun 2022 – Present

- Conduct 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
- Manipulate data and conduct data visualization work in Python and utilizing the NumPy and Pandas libraries to employ and analyze performance of the SGD algorithm, ultimately improving performance by several orders of magnitude
- Communicate progress with SIT President Nariman Farvardin in periodic conferences to establish checkpoints and goals

**Rabinovitch Research Group** | Hoboken, NJ

Pinnacle Scholar Summer Research Assistant

May 2022 – Present

- Implement Python image analysis on 10 terabytes of high-resolution Mercury images from the MESSENGER spacecraft to identify areas of Mercury's surface with optimal properties for a future rover landing from low-resolution global images
- Design and build 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

## WORK EXPERIENCE

**Stevens Academic Support Center** | Hoboken, NJ

Tutor

Nov 2022 – Present

- Deliver up to 10 hours each week of individual and drop-in instruction to dozens of fellow undergraduates in calculus, programming, and engineering courses across all levels
- 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 2 to 5 news writers and perform high-level editing on several draft news stories each week
- Research, write, and edit about one news story or feature a week, contributing to a total of nearly 30 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 Studio Code, 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

Secretary

April 2022 – Present

- Organize the Chapter's multiyear project to improve water conservation technology in Santiago de Chiquitos, Bolivia
- Schedule, manage, and record weekly general body meetings, outreach events, and executive conferences

**Stevens Honor Board** | Hoboken, NJ

Recording Secretary

Mar 2022 – Present

- Protect and promote the culture of integrity, honesty, and responsibility at Stevens through outreach and education, as well as by participating in weekly conferences with the Board
- 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