

# Jason Bak

New York, NY | (908) 328-6042 | [jb2726@cornell.edu](mailto:jb2726@cornell.edu)

## EDUCATION

---

### Cornell University—College of Engineering

B.S. Mechanical Engineering, Minor in Business

Ithaca, NY

Expected May 2027

Cornell Traditions Fellow

Relevant Coursework: Fluid Mechanics, System Dynamics, Mechanics of Engineering Materials, Thermodynamics

Skills: SolidWorks, AutoCAD, MATLAB, Python, WaterGEMS, ETL, Excel, Data Analysis, Technical Writing

## ENGINEERING EXPERIENCE

---

### U.S. Public Health Service

Parker, AZ

Mechanical Engineering Intern

May 2025 - August 2025

- Drafted Preliminary Engineering Documents and helped design models (AutoCAD, WaterGEMS) in partnership with Indigenous American tribes to secure funding and deliver resilient infrastructure improvements on tribal lands.
- Conducted field diagnostics, failed-septic assessments, pressure logging, manhole inspections, and assisted with construction observation to ensure contractor and N.E.P.A. compliance.

### Cornell University - S.C. Johnson College of Business

Ithaca, NY

Research Assistant, Teacher's Assistant

January 2025 - May 2025

- Collaborated with Professor Robert Karpman to input and present simulation data via GitHub, ensuring accurate and accessible formatting for instructional use.
- Supported students in AEM 4461 by managing access to the simulation, answering technical questions, and providing hands-on guidance throughout the course.

### Wolfram|Alpha

Remote

Computational Researcher

February 2024 – February 2025

- Conducted research in computational mathematics using Python and ETL tools to develop models for understanding its properties through volumetric analysis, contributing to advancements in data modeling.

## PROJECTS

---

### Havasupai Water Tower Rehabilitation

Supai, Arizona

U.S. Public Health Service

Summer 2025

- Communicated with engineers and tribal authorities to assess structural and hydraulic integrity of a 100,000-gallon elevated water tower serving the Havasupai Indian Reservation.
- Modeled pressure distribution and flow rates to evaluate pump head losses for consistent community water access.
- Developed rehabilitation design recommendations, including location, pipe replacement, and repairs to secure federal funding.

### Septic System Construction for Five Sites

Fort Mojave, Arizona

U.S. Public Health Service

Summer 2025

- Conducted test pit analysis and site evaluations to determine soil permeability and inform septic tank sizing.
- Assisted in system design, drafting as-builts, and producing engineering documentation in compliance with NEPA and EPA wastewater standards.
- Supported construction observation and contractor coordination to ensure installation accuracy and system performance across five sites.

## LEADERSHIP EXPERIENCE

---

### Cornell University

Ithaca, NY

Ganędagō Hall Council President

August 2024 – Present

- Successfully organized and executed residence hall events, enhancing community engagement by ~20% and fostering a positive living environment.
- Coordinated effectively with housing staff, Residential Advisors, and representatives from Cornell University Residence Life and Community Standards to ensure seamless event planning and address resident needs.