

Sam Pautrat

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EDUCATION

Cornell University- College of Engineering

Ithaca, NY

B.A. Information Science - Interactive Technology Concentration

Aug 2022 - May 2026(Expected)

- **Relevant Coursework:** Math 1920(Multivariable), 2930(Differential Eq), 2940(Linear Algebra), CS 2110 (Java), Info 1300(HTML,JS,CSS), Info 2950(Data Science), Info 4120(Ubiquitous computing), Orie 3120(Machine Learning), Info 4240(Design tech for social impact), Phys 1112(Physics:mech+heat), Phys 2213(Electromagnetism)
- **Campus Involvement:** Cornell Current, Big Red Hacks, Poker Club, Greek Life: SAE alpha chapter

EXPERIENCES

Real Estate Data Science Intern

Queens, NY

Grand Corner Realty | NYC

Jun 2022 - August 2023

- Utilized advanced Excel data entry and analysis skills to efficiently process and organize hundreds of property listings, identifying key metrics and trends to support machine learning predictions for turnaround deals.
- Applied machine learning algorithms to detect high-potential real estate investments, contributing to a projected profit increase of 20% through data-driven insights and strategic deal identification with bi-weekly presentations of the data collected and analyzed.

Statler Hotel Bellstand

Ithaca, NY

Statler Hotel | Cornell Campus

Jun 2022 - Current

- Cooperatively worked as part of a dynamic team to coordinate guest check-ins, luggage handling, and special requests while ensuring an efficient, friendly, and accommodating environment.

PROJECTS

Stock Trading Web App backtesting

- Developed a full-stack stock trading web application that integrates Python-based backend logic with **Yahoo Finance API** to fetch real-time market data, backtesting multiple **trading strategies** over custom periods.
- Visualized data analytics with interactive heatmaps and detailed performance metrics, demonstrating a **70% win rate** and **101% return on investment** on the **DAX index** over a 5-year period.

Unveiling Culinary Cultures: A Data-Driven Analysis of Food Representation in 19th-Century American Fiction

- Utilized **Natural Language Processing (NLP)** techniques including **tokenization**, **frequency analysis**, and **KL Divergence** to quantify and visualize linguistic differences in food representations across regions and genders.
- Employed the **Fighting Words method** to identify the most distinctive food terms associated with specific groups (North vs. South, Male vs. Female).
- Developed visualizations, including **heatmaps** and bar charts, to highlight key findings and cultural insights.

Exploring Electrical Impedance Sensing on Homogeneous Smart Textile

- Designed and developed a prototype using electrical impedance sensing (EIS) integrated with smart textiles, utilizing Arduino programming for real-time data collection and sensor control.
- Applied machine learning algorithms to analyze impedance data, optimizing textile responsiveness and accuracy for potential applications in wearable health monitoring and interactive smart fabrics.

RELEVANT LEADERSHIP

AI4ALL Machine Learning Program | Mentor

Remote

- Led and mentored a diverse group of high school students in the foundational concepts of **machine learning** and artificial intelligence, fostering an inclusive and supportive learning environment.

SAE Steward | Kitchen/Dining Operations

Jan 2023- May 2024

- Managed kitchen operations for **60 brothers**, Led the hiring of kitchen staff resulting in **30+% reduction in costs**

ADDITIONAL INFORMATION

Other Skills: Figma, Webflow, Java, HTML/CSS, R, Python, Tableau, SQL, Excel, React javascript, full-stack dev, app dev, Mathematica, Matlab, mathematics, computer science, computer engineering, backend, react native, C#, data processing, swift, DevOps, C++, node.js, arduino programming, AWS services, Software development,

Design: Adobe Creative Suite, Photoshop, User Research, User Interface Design, Prototyping, Graphic Design

Completed/Pending Certifications: AWS solutions architect associate, Goldman Sachs Software engineering jobs simulation (Forage)