Benjamin Shvartsman

(224)412-6020 | 113 College Ave, Ithaca, NY 14850 | ben.shvartsman@gmail.com | ben.shvartsman.com

EDUCATION

Cornell University *Graduating Dec 2026*
BA in Computer Science, Minor in Artificial Intelligence, Varsity Wrestler

Deerfield High School *May 2022*
2x Scholar's List, 4x Captain of Chess Team, 2x Captain and IL State Champion for Wrestling Team

SKILLS

Languages: Python, C/C++, Javascript, OCaml, SQL
Frameworks & Libraries: TensorFlow, PySpark, CrewAI, Langchain, n8n, Django/Flask, React, Streamlit, Twilio
DevOps & MLOps: Docker, Kubernetes, Google Cloud Platform, CI/CD (Bitbucket, Bamboo)

EXPERIENCE

AI/ML Intern, Business Information and Forecasting September 2023 - September 2024
Ecentria Holdings *Remote*
- Tasked with **clustering of users and products** on the retail website OpticsPlanet.com, leveraging **matrix factorization-based embeddings** to improve recommendations for **millions of users.**
- Integrated clustering outcomes into **TensorFlow projector**, enabling the ability to toggle between various runs for **comprehensive data visualization and analysis**
- Built a **real-time debugging platform in Streamlit**, integrating **API clients** to diagnose and resolve **product similarity issues in production**.
- Conducted **data preprocessing**, **cleaning**, and **analysis** to support and enhance the **efficacy of ML model training and validation.**
- Gained hands-on experience with **Bamboo**, **Bitbucket**, **Docker**, and **JIRA**, contributing to **AI/ML documentation** and **project management.**

PROJECTS

Automated Parking Payment Solution | Flask, Twilio, Python **GitHub**
- Developed a real-time automated parking payment system to reduce costly fines for university sports facilities.
- Implemented a **Flask-based backend** with a **pure SMS-based frontend**, integrating **automated scripting** and **multiprocessing** for immediate payment execution upon spotting a ticket enforcer.
- Processed **$5,000 in transactions** from 40 users **within the first two weeks of deployment**, demonstrating real-world adoption and impact.

Medical Agentic RAG | CrewAI, Streamlit, Groq, Pydantic, Python **GitHub**
- Designed and implemented a **real-time, agentic RAG** (Retrieval-Augmented Generation) system for patient education queries, integrating **CrewAI, ChatGPT-4o, and Groq (LLaMA 3.1-8B Instant)** for dynamic multi-source retrieval and synthesis.
- Developed specialized **AI agents** for **document analysis, search retrieval, and summarization**, leveraging Tavily, Exa, and PyPDF2 to extract actionable medical insights from trusted sources and patient records (PDFs).
- Created a **Streamlit-based frontend** supporting **live document processing**, **topic-specific contextual retrieval**, and **multi-source aggregation** to deliver clear, patient-friendly health insights

Club Management System (Backend) | Django, Calendly, Stripe, Python **GitHub**
- Designed the **backend of a club management system** using Django, supporting **athlete registration, scheduling, and administrative tasks**
- Integrated **secure data handling** and automated payment processing using **Stripe API**, improving club operational efficiency.

COURSEWORK

Cornell: Natural Language Processing, Computer Systems and Organization, OOP & Data Structures, Linear Algebra, Mathematical Foundations of Computing, Probability Models and Inference, Introduction to Machine Learning
Deeplearning.AI: Safe and Reliable AI Guardrails AI, Advanced Use Cases CrewAI, Multi Agent Systems CrewAI, LlamaIndex
Udemy: Machine Learning A-ZTM: AI, Python + GPT Bonus; Machine Learning, Data Science, and Deep Learning with Python; Python Django: Complete Course