John "J.D." Krasnick

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EDUCATION

Cornell University Ithaca, NY
B.S. in Operations Research and Computer Science, College of Engineering *Expected May 2029*
GPA: 3.67/4.0

EXPERIENCE

Jonathan Klick, Professor of Law at the University of Pennsylvania Philadelphia, PA
Research Assistant *June 2025–August 2025*
– Scraped, cleaned, and pipelined data from websites, Excel files, and PDFs using Python and NumPy, producing organized CSV datasets for research analysis

Brain-Computer Interface Research Lilley Fellowship Scholar
Research Scholar
– Engineered a brain-computer interface that interprets EEG signals using Python, Fast Fourier Transform (FFT) algorithms, and electrode data
– Programmed real-time signal processing and control logic on Raspberry Pi and Arduino to drive a robotic arm

RESEARCH

Cornell University - Operations Research & Information Engineering Ithaca, NY
Undergraduate Researcher *January 2026–Present*
– Conducting research on deep reinforcement learning applications for queueing network optimization under Professor Jim Dai

TECHNICAL SKILLS

Languages: Java, Python, C++, HTML
Machine Learning & AI: Scikit-learn, TensorFlow, PyTorch, OpenCV
Data Science & Analysis: NumPy, Pandas, SQL, Web Scraping, Matplotlib

PROJECTS

MarketSent – Financial Market Sentiment Dashboard (Python, Flask, React, PostgreSQL)
– Built a full-stack sentiment analytics app that tracks real-time public sentiment on stock tickers using FinBERT NLP classification of Reddit finance discussions
– Developed RESTful APIs and an interactive dashboard with trend visualizations; deployed via Vercel/Render with a modular ETL pipeline and PostgreSQL backend

Recollect – Intelligent Document Q&A System (Python, ChromaDB, SQLite)
– Built a Retrieval Augmented Generation (RAG) system enabling semantic search and conversational Q&A over PDF, TXT, and Markdown documents with source attribution
– Implemented persistent conversation memory with automatic AI-powered summarization, local vector embeddings via Sentence Transformers, and configurable chunking strategies for optimized context retrieval

Critter World – Evolutionary Ecosystem Simulator (Java, JavaFX, Spark, REST APIs, Junit)
– Built a 15,000+ line multi-threaded simulation engine with custom DSL compiler (lexer, parser, AST) for autonomous agent behavior as part of Cornell CS 2112
– Developed genetic mutation system and concurrent REST API/GUI interfaces with thread-safe access patterns

AWARDS

American Invitational Mathematics Examination (AIME) Qualifier October 2022, October 2024

Cum Laude Society May 2025