Noah Rizika

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QUALIFICATIONS

- **Disciplined self-starter** with a proven ability to quickly learn and apply new technologies independently
- **Hard Skills:** C/C++, TypeScript, Python, RTOS, IP/TCP, React/Next, PostgreSQL, AWS, Linux, Git, Wireshark
- **Machine-Level Engineer:** Built networked embedded systems with motor control and SPI-based sensors
- **Full Stack Development:** Enhanced UX by leading the development of a full data pipeline and automated API scrapers to address customer demand for additional data sources.
- **Machine Learning Engineer:** Built ML pipeline and fine-tuned CNN for Dartmouth biology research
- **Git, CI/CD & Testing Frameworks:** Experienced in agile workflows—ensuring seamless code integration, automated testing, and efficient delivery of production-ready software
- **Certificates:** AWS Machine Learning Engineer Nanodegree (Udacity), Security+ (CompTIA)

EDUCATION

Middlebury College Middlebury, VT

Bachelor of Arts -- Biochemistry / Computer Science Focused September 2021 - May 2024

- **GPA:** 3.82, Summa Cum Laude, College Scholar (Highest Academic Honor) all semesters
- **Relevant Coursework:** Software Development, Systems Programming, Systems Security, Computer Architecture, Computer Networks, Data Structures and Algorithms, Big Data Analysis, Calculus II, Electromagnetism
- **Leadership & Activities:** Climbing Club President and Coach, Water Polo Captain, Community Friends and Sports PT Volunteer, Recipient of Middlebury's Cross-Cultural Community Engagement Grant

EXPERIENCE

Computer Science Department, Middlebury College Middlebury, VT

Assistant Computer Science Instructor September 2024 - Present

- Sets and manages personal office hours and collaborates with faculty to assist in lab sessions for student support in introductory to advanced computer science courses, teaching with JS, Java, Python and C
- Leads the development of pedagogical training programs in collaboration with administration and faculty, aimed at enhancing course assistants' ability to deliver quality educational support
- Supervises and coordinates the hiring, training and help session scheduling for course assistants

Atom Grants Remote

Junior Full Stack Developer September 2024 - March 2025

- Shipped production code at a fast-paced and growing AI-focused startup, helping to streamline scientific grant application workflows and contributing to cutting-edge backend solutions
- Created Python and TypeScript web scraping scripts to crawl, process, and clean grant data from 1,200+ foundations, enabling real-time access to over 25,000 grants and strengthening the user experience
- Lead the development of internal admin dashboards using Next.js, Tailwind, TypeScript, PostgreSQL (Supabase) and Docker, building the UI/UX and managing security of functions

Eric Bleich MPoMP Lab, Middlebury College Middlebury, VT

Data Analyst and Developer September 2023 - May 2024

- Analyzed 600,000+ articles on a small team via collocations, sentiment analysis, topic modeling and Pandas analysis to uncover emerging AI politicization and changes in the use of climate crisis terminology
- Created Python scripts with PyPdf to convert PDFs to custom-formatted .txt files to expand viable data
- Developed cross-tabulation functions using NumPy for analyzing multivariate categorical data

Bing He Biological Research Lab, Dartmouth College Remote

Machine Learning Engineer August 2023 - October 2023

- Developed a computer vision model to classify cell stage development and expedite data collection
- Built a full workflow using limited, unsupported image data with PyTorch and OpenCV in AWS SageMaker

PROJECTS (https://github.com/noahrizika)

Semi-Autonomous Drone Swarm

- Building an ESP32 drone swarm, using AI-generated stabilization algorithms and sharing command and telemetry data among drones and the master computer via MQTT and ESP-NOW using C++ and Python

Autonomous Room-Mapping Robot

- Built an Arduino-based robot, communicating sonar sensor data, positional coordinates, and movement instructions over bluetooth using C++
- Sonar data is analyzed to render a 2D map in real time using the transmitted data, Matplotlib, SciPy, and clustering algorithms in Python

Systems Engineering

- Wrote a fully-functional Linux shell in C with multiprocessing for command piping and I/O redirection
- Optimized low-level system calls (read, write, sbrk) for improved performance and memory management

Cybersecurity Chatbot

- Developed a full stack Next.js web app using Typescript, Tailwind, Supabase and OpenAI's API to create a prompt-engineered AI assistant for attack payload development and analysis

Outdoor Rock Climbing Website

- Developed a full stack React.js web app integrating Google Maps and RESTful weather APIs to guide users to new climbing areas
- Connected PostgreSQL to a Node.js backend to manage and display college climbing events in real time
- Analyzed mixed climbing data using Python's Pandas library to make a novel rock climbing grading system and built a user-friendly UI for easy application of the grading system to a user's own climbs

PRIOR PUBLICATIONS, RESEARCH EXPERIENCE & CONFERENCES

- **Upcoming Publication:** Lessons from Special Operation Forces for Competition Across the Continuum: Special Report for the Office of the Chairman, West Point Press
- **Published:** What's the deal with terms like "greenhouse effect," "global warming," "climate change," and "the climate emergency"? (Jun 2024), *Yale Climate Connections* & *Irish Environment* (republication)
- **Data Science Researcher** (Sep 2024 - Mar 2025): Analyzed media trends of AI political polarization and evolving usage of environmental terminology
- **Neuroscience Research Assistant** (Jan - May 2023): Studied how attentional control and satiety impact odor perception
- **Qualitative Data Analyst for Food Systems Research** (Jul - Sep 2023): Analyzed key themes and stakeholders using expert interviews and presentations on global food system transformation with NVivo
- **West Point Social Sciences Seminar Rapporteur** (Feb 2025): "States, Societies, and Security In the 21st Century"

Eligible for TS w/ Polygraph Security Clearance