Jasper Sands

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EDUCATION

Columbia University   New York City, NY
Master of Science in Computer Science   Dec 2026
Relevant Coursework: Quantum Computing,Neural Networks and Deep Learning, Machine Learning for Functional Genomics

Washington University in St. Louis   St. Louis, MO
Bachelor of Science in Computer Science and Economics, GPA: 3.81/4.0   May 2025
Relevant Coursework: Machine Learning, Artificial Intelligence , Computer Security, Reverse Engineering and Malware Analysis, Analysis of Algorithms, Algorithms for Biosequence Comparison, Parallel and Concurrent Programming
TA: Reverse Engineering, Parallel Computing

SKILLS

Languages: Python, C++, C, Java, MATLAB, SQL, Bash
Frameworks/Libraries: Qiskit, NetworkX, TensorFlow, PyTorch, Keras, Scikit-learn, NumPy, Pandas, Numpy, SciPy, Matplotlib
Other Tools: Git, qBraid, Docker, Linux/Unix, VS Code, Jupyter, Hugging Face, CUDA, LaTeX, REST APIs, GCP

WORK EXPERIENCE

Highnote   San Francisco, CA
Cybersecurity Engineer Intern   May 2024 - Jul 2024
- Consolidated fragmented monitoring across AWS, GCP, and Datadog into a unified Elasticsearch observability platform, eliminating redundant alerts and improving visibility for the SecOps team.
- Pioneered 100+ cross-system and ML-based alerts that cut incident-response time by 60%; established threat-detection template.
- Scaled SIEM ingestion pipelines handling over 1TB of daily logs, laying the groundwork for future infrastructure growth.

Mindtrip   Palo Alto, CA
Software Engineer Intern   May 2023 - Jul 2023
- Identified manual data-entry bottlenecks and independently built Retool admin dashboards using Ruby on Rails and JavaScript, saving 250+ engineering hours/month.
- Developed and integrated a large-language-model recommendation engine that personalized travel plans for thousands of users, improving engagement and retention.

Bugcrowd   San Francisco, CA
Associate Application security Engineer   May 2020 - Jul 2020
- Streamlined vulnerability triage by refining criteria for bug-bounty submissions, accelerating turnaround for Fortune 500 clients.
- Partnered directly with enterprise security teams to deploy long-term remediation strategies that reduced repeated exploit classes.

RESEARCH

Complex Resilient Intelligent System Lab Assistant Researcher   May 2025 - Present
Graduate Student Researcher
- Developing a drug-discovery pipeline to reduce hallucinations in AlphaFold by reasoning on EDAM ontology graphs.
- Automated large-scale feature extraction across ~150,000 known protein domains, cutting structural-analysis time by 85% and enabling richer comparative studies.

Security Research   Sep 2025 - Present
Graduate Student Researcher
- Partnering with Barracuda Networks to prototype ML models for phishing detection, exploring transformer-based evaluators for real-time spam scoring.

Foster System Database Undergraduate Student Researcher   Sep 2024 - May 2025
Undergraduate Student Researcher
- Engineered and fine-tuned a LLaMA 3-based model with Unsloth to answer complex queries over 50 k foster-care policies— creating one of the first searchable, cross-state policy tools in the lab.
- Launched a Human-in-the-Loop Reinforcement Learning framework on Hugging Face Spaces, allowing researchers to iteratively refine model behavior.

LEADERSHIP ROLES & CAMPUS ACTIVITIES

WashU Votes   Sep 2021 - May 2025
- Spearheaded campus-wide voter-registration drives and coordinated policy forums with state legislators, increasing student voter turnout by 20%.
- Led State Senate advocacy trips that secured new polling access for St. Louis universities.

Washu Hacks   Oct 2023
- Created *Subletify*, a React + Supabase marketplace enabling verified student subletting; won 1st place for Social Networks track.

WashU Gymnastics Club   Sep 2021 - May 2025
- Organized practices and coached teammates through national competitions, enhancing team cohesion and competitive readiness.

Activities & Interests: CU Triathlon Club, CU Climbing Club, CU Autonomous Racing Team, Minnesota Vikings