Liam Cassidy

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Education

Dartmouth College — Hanover, NH
Bachelor of Engineering in Computer Engineering (Dual-Degree Program) — *June 2023 – June 2026*

Colby College — Waterville, ME
Bachelor of Arts in Computer Science, Minor in Mathematics — *Aug. 2021 – May 2025*

Experience

Data Science Intern — June 2025 – Nov. 2025
Everstream Analytics — *Remote*

- Developed, maintained, and deployed dockerized Python scripts using BeautifulSoup and Selenium to automate data collection from online news sources on an AWS Lambda, ensuring compliance with terms of service and robots.txt directives
- Implemented hierarchical trade relationship discovery methodology using shipment data and entity resolution services to identify facility partnerships across multiple geographic precision levels and reveal multi-tier supplier networks

Undergraduate Research Assistant — June 2024 – May 2025
INSITE Lab at Colby College — *Waterville, ME*

- Facilitated development of Swift application with containerized Express.js & React.js server allowing blind and vision-impaired users to navigate indoors with the Boston Dynamics Spot robot
- Designed a local server-based archival tool in MongoDB & React.js to manage and analyze meteorological and ecological data
- Processed months of bird audio recordings using machine learning techniques, including spectral feature extraction and unsupervised clustering, to identify patterns in species activity and behavior

Undergraduate Data Science Intern — Sep. 2023 – Mar. 2024
DIFUSE Project at Dartmouth College — *Hanover, NH*

- Devised Python-based Jupyter Notebook exercises integrating data science concepts into Geography and Physics curricula using Pandas and Matplotlib as part of an NSF-funded project

Undergraduate Smart-Home Technology Researcher — July 2023 – Aug. 2023
Dartmouth College — *Hanover, NH*

- Conducted technical analysis of Matter-enabled smart-home devices, streamlining onboarding flows across iOS and Android with a diverse research team; co-authored a paper accepted to ACM HotMobile 2024

Projects

Airlytics | *Python, Android, PostgreSQL, Heroku* — Sep. 2025 – Mar. 2026

- Collaborated in a 4-person team with an industry sponsor to deploy a full-stack HVAC fault detection system, ingesting live telemetry from a mini-split heat pump and surfacing real-time fault alerts on a contractor-facing dashboard
- Built and managed a cloud-hosted data pipeline parsing raw sensor logs, engineering rolling-window features, and running dual-model ML inference—achieving 65-minute mean detection latency and a 2.17% false alarm rate

Twitter Analysis of Online Vaccine Discourse | *Twitter API, Python, R* — Jan. 2022 – Aug. 2023

- First Place Winning Team of the Columbia University 2023 COVID Information Commons Student Paper Challenge
- Applied topic modeling and community detection techniques in Python and R to analyze Twitter user, post, and hashtag data, uncovering demographic patterns and mapping user influence in online vaccine discourse

Technical Skills

Languages: Java, Python, C, Swift, SQL, JavaScript, HTML/CSS, R, MATLAB, VHDL
Frameworks: Express.js, React.js, Node.js, Flask
Developer Tools: Git, Docker, Singularity, AWS, MongoDB, Jupyter, Linux, VS Code, Eclipse
Libraries: pandas, NumPy, Matplotlib, scikit-learn, BeautifulSoup, Selenium