Luke Pitstick

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Education

University of Colorado Boulder Aug. 2024 – May 2028
Bachelor of Arts in Data Science and Political Science *Boulder, CO*

Experience

Junior Data Manager Oct. 2025 – Present
National Atmospheric & Oceanic Administration *Boulder, CO*

- Processed 30TB+ per week of large-scale ocean acoustic datasets via batch ingestion, validation, and cloud archival pipelines using Oracle DB and AWS S3 to ensure high-fidelity archiving.
- Streamlined water column sonar and passive acoustic data workflows from sea vessel monitoring systems, ensuring high data availability for national research teams.
- Optimized and debugged Python ingest pipelines feeding into NOAA's GIS infrastructure, reducing ingestion errors and increasing the rate of archival by 30%.

Data Science Intern Oct. 2025 – Present
RCV for Longmont *Boulder, CO*

- Engineered high-resolution demographic maps in ArcGIS, R, and Python, enabling campaign teams to visually identify turnout gaps and execute targeted outreach.
- Developed and validated fixed-effects regression models to predict voter turnout, increasing prediction accuracy and driving data-driven campaign strategy.

Representative-at-Large & Historian May 2025 – Present
University of Colorado Student Government *Boulder, CO*

- Supported the allocation of a $36M budget, implementing equitable distribution protocols to fund diverse student programs.
- Spearheaded student legislation and collaborated with the Governor of Colorado to advocate for student interests at the state level.
- Authored legislation regarding campus waste bin policy, successfully increasing waste diversion rates.
- Managed the archival and organization of student government documents to uphold organizational transparency policies.

Student Software Developer Aug. 2024 – May 2025
CU Boulder Office of the Registrar *Boulder, CO*

- Deployed C# services with Selenium to automate student data management, reducing manual entry time by 60%.
- Integrated software solutions enabling school administrators to automate student database updates via CSV batch processing.

Projects

NYC Rent Price Forecaster | *Python, Typescript, Pandas, ArcGIS, PostgreSQL* Nov. 2025 – Present

- Implemented a hierarchical SARIMAX model using historical NYC rent data to forecast neighborhood prices with a MAE of $150.
- Leveraged ArcGIS, FastAPI, and Typescript to build a responsive interface for end-user interaction and spatial visualization.
- Architected a PostgreSQL backend to support high-speed data retrieval and live model refitting.

Citation Generator | *Python, BAML, FastAPI, Playwright, Streamlit, GCP* Oct. 2024 – Nov. 2024

- Developed a citation engine using structured BAML data to programmatically generate academic citations with 100% accuracy.
- Orchestrated FastAPI with GCP Cloud Run to provide a scalable, low-cost scraping API.
- Designed a custom web UI using Streamlit to enhance user experience and accessibility.

Technical Skills

Languages: Python, R, SQL, Typescript, Java
Frameworks/Libraries: Pandas, NumPy, Scikit-Learn, GGPlot2, Seaborn, React, FastAPI
Cloud/Databases: AWS, GCP, Oracle, PostgreSQL, Firestore
Other: Bash, Linux, Git, Vim, ArcGIS, Selenium