

Sam Bock

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EDUCATION

- **California Polytechnic State University, San Luis Obispo** San Luis Obispo, GA
Bachelor of Science in Computer Science; GPA: 3.76 *Sept. 2021 – June. 2025*

EXPERIENCE

- **Lockheed Martin Space** Sunnyvale, CA
Artificial Intelligence and Machine Learning Research Intern *June 2023 - Present*
 - **Tensorflow:** TensorFlow is an open source software library for numerical computation using data flow graphs; primarily used for training deep learning models.
 - **Apache Beam:** Apache Beam is a unified model for defining both batch and streaming data-parallel processing pipelines, as well as a set of language-specific SDKs for constructing pipelines and runners.
- **Coursera** Mountain View, CA
Senior Software Engineer *Jan 2014 - Oct 2016*
 - **Notifications:** Service for sending email, push and in-app notifications. Involved in features such as delivery time optimization, tracking, queuing and A/B testing. Built an internal app to run batch campaigns for marketing etc.
 - **Nostos:** Bulk data processing and injection service from Hadoop to Cassandra and provides a thin REST layer on top for serving offline computed data online.
 - **Workflows:** Dataduct an open source workflow framework to create and manage data pipelines leveraging reusable patterns to expedite developer productivity.
 - **Data Collection:** Designed the internal survey and crowd sourcing platform which allowed for creating various tasks for crowd sourcing or embedding surveys across the Coursera platform.
 - **Dev Environment:** Analytics environment based on docker and AWS, standardized the python and R dependencies. Wrote the core libraries that are shared by all data scientists.
 - **Data Warehousing:** Setup, schema design and management of Amazon Redshift. Built an internal app for access to the data using a web interface. Dataduct integration for daily ETL injection into Redshift.
 - **Recommendations:** Core service for all recommendation systems at Coursera, currently used on the homepage and throughout the content discovery process. Worked on both offline training and online serving.
 - **Content Discovery:** Improved content discovery by building a new onboarding experience on coursera. Using this to personalize the search and browse experience. Also worked on ranking and indexing improvements.
 - **Course Dashboards:** Instructor dashboards and learner surveying tools, which helped instructors run their class better by providing data on Assignments and Learner Activity.
- **Lucena Research** Atlanta, GA
Data Scientist *Summer 2012 and 2013*
 - **Portfolio Management:** Created models for portfolio hedging, portfolio optimization and price forecasting. Also creating a strategy backtesting engine used for simulating and backtesting strategies.
 - **QuantDesk:** Python backend for a web application used by hedge fund managers for portfolio management.

PROJECTS

- **Plan2Gather:** Open source python library for financial data analysis and machine learning for finance.
- **Shibboleth Login Alerts Automation:** Data Visualization of Git Log data using D3 to analyze project trends over time.
- **Custom PC Builder and Trader:** Music and Movie recommender systems using collaborative filtering on public datasets.

PROGRAMMING SKILLS

- **Languages:** Python, SQL, Java, C++, C

Technologies: TensorFlow, Keras, Scikit-Learn, Linux, Azure, Jira, GitHub, Slack Bolt API, Splunk