

# Alihan Baysal

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## EDUCATION

### • Oregon State University

*Bachelor of Science in Computer Science; GPA: 3.98*

Corvallis, OR

September 2019 – March 2024

## EXPERIENCE

### • Google

*Software Engineer*

Mountain View, CA

Oct 2016 - 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

*Senior Software Engineer*

Mountain View, CA

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 reusables patterns to expedite developer productivity.

- **Data Collection:** Designed the internal survey and crowd sourcing platform which allowed for creating various tasks for crowd sourding 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 Coursesa, 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

*Data Scientist*

Atlanta, GA

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

- **QuantSoftware Toolkit:** Open source python library for financial data analysis and machine learning for finance.

- **Github Visualization:** Data Visualization of Git Log data using D3 to analyze project trends over time.

- **Recommendation System:** Music and Movie recommender systems using collaborative filtering on public datasets.

## PROGRAMMING SKILLS

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

- **Technologies:** AWS, Play, React, Kafka, GCE