



Jay Royal Orten

Machine Learning Student

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Education

April 2025 **Bachelors of Science, Computer Science: Machine Learning Emphasis**,
Brigham Young University, Provo, UT
Full Tuition BYU Academic Scholarship (4 Years), GPA: 3.94/4.00

Programming

Proficient in

- Python
- SQL
- PyTorch
- Hugging Face
- Bash
- Pandas
- AWS/GCP
- LaTeX

Experience with

- Java
- C/C++
- Hadoop
- Docker
- Agile

Work Experience

Jan 2023 - Cur. **Research Assistant**, DRAGN Labs, BYU

- Trained RNN and Transformer language models to achieve improved controlled generation via novel alternative model architectures; wrote and submitted a paper to AAAI-24.
- Developed long-term research proposal focused on the development of understanding in large language models by means of natural language environments.
- Currently working with team to train large LLaMA2 models on super-computing infrastructure in order to achieve better performance on reasoning tasks via the implementation of advanced research techniques.

Jun – Aug 2023 **Data Production Support Engineer**, Lumen

- Acted as Hadoop Administrator over large scale production and development clusters, managing tools such as Hive, YARN, and Impala, and assisting developers and data scientists with their support tickets.
- Coordinated with admin team to respond effectively to cluster and environment issues, achieving a near constant service up-time.

Jun – Aug 2022 **Software Engineer**, FamilySearch

- Utilized Spring Boot, PostgreSQL and AWS to engineer scalable REST APIs in a CI/CD system, helping team to deliver products effectively in an Agile environment.
- Provisioned Amazon S3 bucket and built endpoints for efficient image storage/retrieval via presigned URLs, allowing large amounts of metadata to be stored server-side.
- Wrote a PySpark script for compiling lists of persons from a data collection of almost 70 million records, enabling app to display thousands of interesting cemetery sites.

Coursework

- Deep Learning
- Machine Learning
- Linear Algebra
- Probability
- Statistical Modeling
- Database Systems
- Data Structures
- Algorithm Design
- Computer Systems

Projects

2023 **ChessGPT**

Trained a 774M parameter auto-regressive language model from scratch to play chess competitively via move sequence data.