

# Luke Richards

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## EDUCATION

### Applied Computational Mathematics Emphasis (ACME), Minor in Computer Science

Apr 2027

Brigham Young University

Provo, UT

- GPA 3.91
- 4-year Full Tuition Merit-Based Scholarship
- Dean's List, College of Mathematics – Fall 2024
- Relevant Coursework: Data Structures, Discrete Structures, Linear Algebra, Differential Equations, Advanced Software Construction, Computer Systems, Web Programming, Neurobiology

## SKILLS

**Proficient in-** C++, Python (Numpy, Pandas, Matplotlib, SciKitLearn, SHAP, CalmAn), Java (GSON), SQL

**Additional Skills-** Fluent in French

## EXPERIENCE

### Data Science Intern (Python)

Jan 2024-Present

Owlet Baby Care

- Develop and automate Python scripts to efficiently collect, process, and transfer weekly data into BigQuery tables.
- Build user-friendly dashboards enabling business stakeholders to gain actionable insights from the data.

### Neuroscience Computer Programmer (Python)

Oct 2024-Present

Brigham Young University Life Sciences Department

Provo, UT

- Spearhead data management, processing, analysis, and visualization of terabytes of EEG and neuron calcium videos to create intuitive data pipelines for current and future researchers.
- Redesign thousands of lines of code conglomerate into intuitive, readable class structures.
- Train and lead team of 5 data research assistants and collaborated with 8 lab research assistants

### Researcher and Journalist

Sep 2024-Present

Brigham Young University Kennedy Center for International Studies

Provo, UT

- Lead research on international development strategy, interviewing leading experts and local directors.
- Write the cover piece for the alumni magazine on what works and doesn't in international development.

### Machine Learning Psychology Researcher (Python)

Apr 2024-Oct 2024

Brigham Young University Mathematics Department

Provo, UT

- Identified data discrepancies affecting over 50% of provided data.
- Collaborated upstream with the data engineering team to fix discrepancies, proposing and implementing a novel data framing technique that demonstrated a 3x increase in accuracy.
- Cleaned and processed tens of thousands of therapy questionnaires (OQ) from 13,000 clients over 9 years.
- Analyzed newly cleaned data using machine learning and SHAP to predict dropout clients and generate actionable insights for clinic administrators.

**Math Educational Video Creator (Adobe Photoshop)****Sep 2023-Jan 2024***Brigham Young University Mathematics Education Department**Provo, UT*

- Conceived of video ideas, wrote and edited scripts, storyboarded, animated, and edited videos about transport optimization, physics, and encryption, that are available on the Math Education [website](#).
- Contributed to an 11x video views record and a 5x subscriber increase. Collaborated with 5 team members and specialists for video production and refinement.

**Owner / Operator****Apr 2013 -Sep 2021***Richards Mowing**Orem, Utah*

- Successfully launched and managed a profitable lawn care business. Grew the business from 1 lawn to 22 lawns with 95% repeat customers year after year, and managed 3 employees.
- Maintained strong client relationships and accurate financial records.

**VOLUNTEER EXPERIENCE****Full Time Volunteer Representative****Jul 2021 - Jun 2023***The Church of Jesus Christ of Latter-day Saints**Abidjan, Côte d'Ivoire*

- Served 5 months as secretary to the mission, supporting the mission president and 190 volunteers, arranging international visas, flights, and accommodations for traveling missionaries and planning the president's schedule.
- Proposed and launched a weekly video newsletter that included analytics, community stories, and health counsel.