

**Bailey Bjornstad**

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September 20, 2022

**Ezoic Recruitment**

*Ezoic*

*6023 Innovation Way*

*Carlsbad, CA 92009*

Dear Hiring Manager:

Sincerely,

**Bailey Bjornstad**

# Bailey Bjornstad

*Data Engineer and Analyst at unumAI*

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in bailey-bjornstad

## Experience

### Data Engineering and Analysis

2020–2022 **Data Engineer and Analyst**, *unumAI*, Denver, CO

Developed company data management software from mathematical specifications with focus on collection and processing of Google Trends Search data for political prediction and issue analysis research.

- Led company technical development through implementation of most company methodologies using Python, SQL, and Azure to facilitate easy collection, transformation, storage, and PowerBI presentation of Google Trends search data.
- Used asynchronous request tooling in tandem with Azure Function Applications to increase data collection speeds by orders of magnitude at very low cost.
- Integrated Azure tooling for company data maintenance to provide a foundational and extensible software platform for data integration that is accessible to those not necessarily familiar with programming methods or languages.
- Wrote complex DAX code to tackle interactive visual measurement and display of Google Trends Search data across all client contexts.
- Assisted company clients during product and project pitch presentations by clarifying technical aspects of estimation and analysis, or with outright presentation of material to prospective client teams.
- Exhibited a strong ability to think quickly and understand new domain specific knowledge across fields as applied to a specific question or technical problem.
- Demonstrated self-sufficiency in a remote environment, managing expectations and workload on a team of only two people in a fast paced environment and with many responsibilities.

2019–2020 **Data Management and Analytics Specialist**, *Bright Event Rentals*, San Diego, CA

Assisted company analytics endeavors through CyberQuery programming on database of transactions, rental equipment, and customers

- Wrote customized and automated database queries using CyberQuery to improve rental business analytics and reporting
- Facilitated major revenue generation by using historical data to optimize sales of equipment rental protection policies
- Classified customers in terms of business strategy goals using data to identify inconsistencies between company locations

### Mathematics

2017–2019 **Teaching Assistant**, *Northwestern University*, Evanston, IL

Assisted professors of six multivariable and single-variable undergraduate calculus classes by running discussion sections and working one-on-one with students.

2017–2018 **Peer Tutor**, *Northwestern University*, Evanston, IL

Assisted fellow undergraduates of Northwestern University with a variety of math courses in a weekly, drop-in setting.

Summer 2017 **Independent Research in Math**, *Northwestern University*, Evanston, IL

Developed a concept of *mathematical fragility* in birth and death stochastic processes.

- Used Python and accompanying analytical tools to develop a preliminary model through simulation of birth and death stochastic processes.
- Mathematically analyzed examples to verify properties of these preliminary models.
- Abstractly developed these preliminary models using mathematical tools from probability to draw out quantities that describe the fragility of a process.

Fall 2016 **Research Assistant**, *Northwestern University*, Evanston, IL

Aided research on inquiry-based approaches to math education by recording classes and documenting student interactions in a novel classroom setting.

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## Education

2015–Present **Mathematics**, *Northwestern University*, Evanston, IL, GPA: 3.7/4.0

Undergraduate major in Math with emphasis on advanced classes where possible.

Relevant Courses:

- *ISP Math* — A three quarter intensive course covering multivariable calculus, ordinary differential equations, and linear algebra.
- *Foundations of Higher Math* — A single quarter course on the standards of mathematical proof.
- *MENU Real Analysis* — A three quarter intensive course that rigorously develops calculus, including measure theory.
- *MENU Abstract Algebra & Abstract Algebra* — Two quarters of an intensive course devoted to the study of groups and rings, followed by a one quarter course on Galois Theory.
- *Other Computer Science & Applied Math* — Various computer science and applied math courses covering topics including data structures, Python implementations of fundamental algorithms from machine learning, and computational neuronal modeling.

**Music Technology**, *Northwestern University*, Evanston, IL

Undergraduate minor in Music Technology, with coursework focused on synthesis and analysis of electronic music. In a degree project, co-designed and prototyped a laser harp digital music interface.

2011–2015 **High School Diploma**, *Pacific Ridge School*, Carlsbad, CA, GPA: 4.0/4.0

Relevant Achievements:

- *Captain of Robotics Team* — Led a team of peers to multiple podium finishes in First Tech Challenge robotics competitions.
- *Theatrical Technical Director* — Organized and produced the technical side of yearly musicals and plays, particularly with regards to audio.

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## Awards

May 2016 **Excellence in Mathematics by a First-Year Student**, *Northwestern University*, Evanston, IL

Award given to students who display strong achievement in a number of advanced mathematics courses offered at Northwestern University.

May 2019 **Certificate of Recognition for Service as an Undergraduate Teaching Assistant**, *Northwestern University*, Evanston, IL

A certificate given to senior teaching assistants who dedicated their distinguished skills by continually serving Northwestern's math department.

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## Computer Skills

Programming	Python, SQL, R	Expert
Cloud Services	Azure	Proficient
Statistics	Numpy, Pandas	Expert
BI/Visualization	Microsoft Power BI, Matplotlib	Expert
Typesetting	L <sup>A</sup> T <sub>E</sub> X	Expert
Linux	Built and maintain a customized installation of Arch Linux as my daily operating system. Familiar with many other distributions as well.	

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## Hobbies and Interests

Radio DJ Host of *Non-Euclidean Space*, *Excitotoxicity*, and *Late Night Geometries* on WNUR 89.3 FM, with focus on electronic music of different geometries.

MTG Have played the trading card game *Magic: The Gathering* at a competitive level.

Cooking In the kitchen, a devotee of *Good Eats*'s Alton Brown and publications *Serious Eats* and *Cook's Illustrated*.

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## References

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