

# BINIYAM GEBREYOHANNES

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## EDUCATION

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### University of Washington Seattle

*B.S. in Computer Science*

### North Seattle College

*Associates of Science*

**GPA: 3.9**

**Seattle, WA**

*Expected Graduation Date: June 2026*

**Seattle, WA**

*September 2022 – June 2024*

## EXPERIENCE

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### Artificial Intelligence and Machine Learning Intern

*STEMTAC Foundation*

**Seattle, WA**

*January 2024 – June 2024*

- Collaborated with a 20-member team to develop and enhance facial recognition software using Python.
- Designed and optimized a machine learning model for face detection with OpenCV and Azure Custom Vision.
- Implemented rigorous testing protocols, improved detection efficiency through iterative refinements.

### Undergraduate Research Intern

*Clean Energy Institute, University of Washington*

**Seattle, WA**

*June 2024 – August 2024*

- Used Python Pandas to analyze one year of mini-grid customer data, finding key patterns and insights to improve strategic planning and operational efficiency.
- Developed predictive machine learning models for forecasting electricity demand trends, correlating payment behaviors with temperature and precipitation data, achieving an accuracy of 82%.

## PERSONAL PROJECTS

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### Global Weather Manager

- Set up a Weather Manager that processed a CSV file with 1 million rows of weather data and applied natural ordering by country, state, city, year, month, and day.
- Integrated a binary search algorithm to increase computational efficiency from  $O(n)$  to  $O(\log n)$ .
- Constructed a function to calculate linear regression of certain cities over specific time spans.

### Book Browsing Application

- Utilized recursion to navigate through a binary search tree of 9000+ book options, minimizing redundant traversals.
- Addressed undefined problems and applied abstract thinking to enhance the interface.

### Discord Bot Project | Python, EC2\_metadata, AWS EC2, Discord API

- Constructed a Python application to ping a Discord server and query data from an AWS EC2 instance using the EC2\_metadata API.
- Created an AWS EC2 instance and integrated it with a live Discord server to provide real-time metadata.
- Developed a bot to automate responses to common inquiries, reducing interruptions to engineering teams and increasing productivity.

## TECHNICAL SKILLS

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- **Languages:** Python, Java, JavaScript, HTML, CSS
- **Tools:** OpenCV, Azure Custom Vision, Amazon EC2, S3, Pandas