

# Grant Alphenaar

**Location:** Grand Rapids, Michigan

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## Relevant Experience

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### **Master Thesis Research**, Grand Valley State University, Allendale, MI

- January 2022 – present
- Conducted research centered around feature extraction from transformer-based language models using PyTorch and HuggingFace libraries to predict ratings for online MOOC courses through upstream classifier models
- Managed and analyzed MongoDB collections consisting of scraped information on 65,000 MOOC courses, including instructor profiles, course information, and course materials
- Prepared written thesis manuscript (in final stages) and presented oral defense (completed)

### **Graduate Research Assistant**, Grand Valley State University, Allendale, MI

- August 2022 – present
- Ran simulations of learning robots using the PyBullet physics engine
- Conducted research in machine learning algorithms to build a self-navigating robot dog
- Coordinated with undergraduate student researcher to 3D print robot parts
- Used Google Cloud Functions to set up cloud computing instances for running simulations and controlling robots

### **Research Associate**, Basis Policy Research, Grand Rapids, MI

- February 2016 – September 2020
- Produced reports and visualizations for external partners based on research and analysis of education data from sources including the Michigan Department of Education and United States Department of Education
- Created a student enrollment and management system with a management dashboard and automated ETL data flow capable of generating summary reports for a multi-site summer program, saving the facilitating organization \$50,000 annually
- Developed an interactive data tool to help a nonprofit organization direct millions of dollars in program funding based off of a nation-wide qualitative and quantitative education policy data collection effort
- Worked with external and government partners to develop ETL data flows and an interactive web dashboard as part of a State of Michigan education data warehousing and analysis initiative
- Produced annual reports detailing school performance and improvement for the Michigan Department of Education
- Supervised and taught data science and coding concepts to summer interns and assisted interns with individual summer research projects

## Community & Social Engagement

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### **Graduate Student Representative**, Grand Valley State University Technology Council, Allendale, MI

- January 2023 – present
- Represented the interests and perspectives of graduate students in discussions with university IT leadership

### **Math Interventionist**, Michigan Education Corps (AmeriCorps), Kentwood, MI

- October 2022 – present
- Delivered targeted math intervention and supplemental instruction to middle school students in a local public school through an AmeriCorps program

**Resident Assistant**, Calvin College Entrada Scholars Program, Grand Rapids, MI

- June – August 2013
- Supervised and lived in on-campus housing with high school students participating in a summer program designed to introduce high school students of color to college-level education

**Student Ambassador**, Calvin College Multicultural Student Development Office, Grand Rapids, MI

- September 2012 – May 2015
- Engaged in campus advocacy, support initiatives, and mentorship for predominantly first-generation college students of color

## Awards & Recognition

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**Excellence-in-a-Discipline Award**, Grand Valley State University, Allendale, MI

- April 2023
- Awarded annually to the “most outstanding” graduate in each of the University’s programs based on faculty and staff nominations

## Education

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**Grand Valley State University**, Allendale, MI

- September 2020 – April 2023 (thesis defense and expected graduation)
- Master of Science in Applied Computer Science
- Concentration in Cybersecurity
- GPA: 4.0

**Calvin College** (now Calvin University), Grand Rapids, MI

- September 2010 – May 2015
- Bachelor of Arts in Economics & Bachelor of Arts in International Relations
- Minor in Mathematics
- GPA: 3.5

## Technical Skills

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### Python

- Machine learning: PyTorch, HuggingFace, scikit-learn, Keras
- Data science: NumPy, pandas, Jupyter Lab
- Data visualization: Matplotlib, Seaborn
- Web development: Flask

### Other Technologies

- Programming languages: Java (intermediate), C/C++ (basic), JavaScript (basic)
- Data analysis: R, Stata
- Data visualization: Chart.js, D3.js, Tableau, PowerBI
- Databases: MongoDB, SQL
- Cloud-based technologies: Google Colaboratory, Vertex AI
- Virtualization & containerization: Vagrant, Docker
- Version control: Git, GitHub
- Operating systems: MacOS (primary/preferred), Linux (Ubuntu, Debian, Raspberry Pi OS), Windows