

# Blake Martin

blakemar@andrew.cmu.edu • (248) 345-0634 • [linkedin.com/in/blakemar](https://www.linkedin.com/in/blakemar) • [btmartin18.github.io](https://github.com/btmartin18)

---

## EDUCATION

### Carnegie Mellon University

Pittsburgh, PA

Master of Science in Machine Learning | GPA: 4.00

Dec. 2022

- Leading a multilingual machine translation research project with the Multimodal Computation Lab

### University of Michigan

Ann Arbor, MI

Bachelor of Science in Data Science with Mathematics Minor | GPA: 4.00

May 2021

- Courses: Deep Learning for Computer Vision, Affective ML, Unsupervised Computer Vision
  - Instructional Aide for Introduction to Machine Learning (Fall 2020, Winter 2021)
- 

## PROFESSIONAL EXPERIENCE

### PathAI

Boston, MA | Remote

Machine Learning Intern

May 2022 – Aug. 2022

- Improved the accuracy and robustness of tissue segmentation models with recent advancements in vision-based attention mechanisms including the neighborhood attention transformer architecture

### Amazon

Seattle, WA | Remote

Software Development Engineering Intern

May 2021 – Aug. 2021

- Programmed heuristic solutions of the Vehicle Routing Problem to optimize driver transport tours, reducing latency by a factor of 2-4 depending on problem size

### KLA Corporation

Ann Arbor, MI | Remote

ML Algorithms Intern

June 2020 – Aug. 2020

- Performed self-supervised representation learning with autoencoders and simCLR in TensorFlow
- Reduced transfer learning latency by 3x while maintaining downstream predictive power

### Gentherm

Northville, MI

Advanced Engineering Intern

May 2019 – Aug. 2019

- Extracted accurate predictions of occupant weight, height, gender, and clothing insulation from a car seat pressure distribution while reducing sensor area required by 98% (*patent pending*)
- 

## RESEARCH EXPERIENCE

### Infinite Outcome Prediction Markets | University of Michigan

Dec. 2020 – July 2021

- Designed a new probabilistic aggregation mechanism to capture Bayesian belief distributions of traders and simulated effects of trader characteristics on compensation (*workshop paper*)

### Computational Physics Group | University of Michigan

Oct. 2018 – Feb. 2021

- Constructed 3D CNNs that predict effective diffusivity of microstructures in batteries
- Analyzed fetal brain MRI scans with gradient descent and adjoint optimization (*journal publication*)

### Cytogenetics AI | Beaumont Health System – Royal Oak

Apr. 2019 – Dec. 2020

- Built a Convolutional Neural Network that can differentiate eight classes of normal and abnormal chromosomes associated with myeloid leukemia at 94% accuracy (*conference presentation*)
- 

## SKILLS

**Programming Languages:** Python, C++, Java, R, SQL, MATLAB

**ML and Data Mining Libraries:** PyTorch, TensorFlow, scikit-learn, OpenCV, NumPy, Pandas, Matplotlib