

Dominick Robinson

dominicr@andrew.cmu.edu • (724) 681-5486 • domonation.dev • linkedin.com/in/dominick-robinson314/

EDUCATION

Carnegie Mellon University

Master of Science in Applied Data Science (MADS)

Rales Fellow

Highly selective graduate program dedicated to cultivating the next generation of STEM leaders through faculty mentorship, professional development, and networking opportunities with academic and industry leaders

Relevant coursework: Linear Models, Generative AI, Statistical Computing, Data Visualization, Data Engineering & Distributed Environments, Software for Large-Scale Data, Computational Methods for Statistics, Time Series, Statistical Machine Learning, Corporate Capstone

Expected May 2026

Pittsburgh, PA

Carnegie Mellon University

Bachelor of Science in Mathematical Sciences (Statistics), Minor in Creative Writing

3.85/4.00 GPA

Relevant coursework: Advanced Data Analysis, Machine Learning, Statistical Inference II, Probability, Probability Models, Text Analysis, Parallel and Sequential Data Structures and Algorithms, Software Construction, Software Engineering for Startups, Imperative Computation, Functional Programming, Operations Research I & II, Numerical Methods, Matrices and Linear Transformations, Multidimensional Calculus, Ordinary Differential Equations, Discrete Mathematics, Real Analysis I

May 2025

Pittsburgh, PA

SKILLS

Languages: Python, Java, JavaScript/TypeScript, R, SQL, C

Frameworks & Libraries: React, Pandas, Spark, Dash, Plotly, Streamlit, REST APIs

Tools: Git/GitHub, PostgreSQL, VSCode, LaTeX, Godot, Databricks, Azure

Functional: Communication, Leadership, Adaptability, Creativity, Analytical

TECHNICAL PROJECTS

CMU Corporate Capstone for United States Tennis Association (USTA)

Jan 2026 - Present

- Analyzed junior and professional tennis tournament and shot-level data to identify pathways to pro success
- Collaborated with technical and non-technical stakeholders to build an automated, updating data product

AI Research Project (Supervised by Prof. Cosma Shalizi)

Jan 2026 - Present

- Investigation sequential probability assignment for procedural text generation
- Training on HPC cluster using the DOLMA corpus (3-trillion-token dataset)

Applied Linear Models Final Project: HIV Treatment Report

Nov 2025 - Dec 2025

- Analyzed clinical trial data to assess HIV therapy effectiveness, finding baseline CD4 count and prior therapy duration predict short-term response, but not long-term immunologic outcomes

Data Engineering Final Project: Automated Data Pipeline and Dashboard

Nov 2025 - Dec 2025

- Collaborated with team to design PostgreSQL schema and ETL pipeline for College Scorecard and IPEDS data
- Developed interactive dashboard with team to visualize and query College Scorecard and IPEDS data

Applied Linear Models Midterm Project: Rail Trails Report

Oct 2025

- Investigated impact of proximity to rail trails on home values, finding no significant effect

Data Visualization Final Project: Dominance of the Big 3/4 in Men's Tennis

Oct 2025

- Cleaned and analyzed ATP Tennis data in R to visualize Big 3/4 dominance in men's tennis

Software Construction Final Project: Santorini

April 2025

- Designed and built a full-stack web implementation of Santorini using Java backend and React frontend
- Implemented RESTful APIs to manage game state, enforce rules, validate moves, and synchronize UI updates

Text Analysis Final Project: Exploring Linguistic Differences Across Generations

Nov 2024 - Dec 2024

- Scraped, cleaned, and tokenized thousands of Reddit comments in Python to build a generational dataset
- Analyzed Gen Alpha, Gen Z, and Millennial text, uncovering shifts in slang, sentiment, and topic use

Operations Research II Final Project: Feeding CMU Orientation **Oct 2024 - Dec 2024**

- Scraped and cleaned nutritional information and prices of Trader Joe's and Whole Foods products using Python
- Mapped products to ingredients in recipes database using Fuzzy library
- Solved integer program to minimize cost of feeding 900 CMU first-years with dietary and nutritional constraints

Tennis ELO Dashboard **Jan 2024**

- Used Plotly Dash to model ATP tennis ELO and what-if scenarios over time, calculated from tennis dataset

Modern Regression Term Projects **Oct 2023 - Nov 2023**

- Used R to analyze the impact of sleep on GPA using linear regression, revealing significant correlations
- Developed predictive model by analyzing instructor evaluation data to identify biases affecting quality scores, revealing significant impacts from course difficulty, instructor attractiveness, gender, and discipline

Graph Theory Research (Supervised by Prof. David Offner) **May 2023 - Dec 2023**

- Developed mathematical tool based on the graph theory game of "cops and robbers"
- Designed graph editor, JSON converter/parser, and computer opponents with optimal strategies

WORK EXPERIENCE

RedZone Robotics **July 2024 - Aug 2025**

Engineering Intern

- Built Python/OpenCV pipeline to digitize and filter laser imagery for camera calibration
- Designed custom optimization objectives and algorithms for autonomous fisheye camera parameter estimation

Mathematical Sciences Department, CMU **Aug 2023 - May 2024**

Teaching Assistant for Multivariate Analysis

- Created and delivered lesson plans for weekly recitations of 30 students
- Hosted office hours, graded homeworks and exams, and created homework solutions using LaTeX

LEADERSHIP

Game Creation Society Project (5 Nights on Wean 4) **Sept 2025 - Dec 2025**

Team Lead

Game Creation Society Project (GCS Smash) **Sept 2024 - Dec 2024**

Team Lead

CMU Pickleball Club, President/Founder **Dec 2022 - Dec 2024**

- Grew club to 500+ members over 4 semesters
- Developed club website (cmupickleball.net)

Game Creation Society, President **Dec 2022 - Dec 2023**

- Communicated and planned talks with industry speakers

Game Creation Society Project (Mad Rabbits: Epic Vegetable Quest) **Sept 2022 - Dec 2022**

Team Lead

Game Creation Society Project (Supreme Hen Donkey), Team Lead **Feb 2022 - May 2022**

- Quickly learned game development in Godot with no prior experience to deliver quality product
- Won **GCS Gold Award** for excellence