

Education

Vermilion Gym.

Master of Electric Types, 4.0/4.0 GPA

- Relevant Courses: Electric Type Mastery, Superb Digging, etc.
- Graduate Research Advisor: Lt. Surge

Vermilion City, Kanto.

May 2025 - May 2026

Bachelor of Digging, 3.9/4.0 GPA

- Undergraduate Research Advisor: Lt. Surge

Aug. 2021 - May 2025

Experience

Ground Type Researcher. *Vermilion City, Kanto.*

Sep. 2024 - present

- Achieved magnitude 10 on three consecutive attacks
- Developed and implemented novel high-magnitude booster item

Undergraduate Digging Intern. *Vermilion Mining Co., Kanto.*

Feb. 2023 - Aug. 2024

- Participated in summer Computing for Global Challenges (C4GC) internship program
 - Planned and implemented 3 Python-based integer linear programming solvers with Dr. S. S. Ravi for NP-hard problems such as the Minimum Set Cover and Minimum Disjoint Descriptor using Gurobi
 - Theorized seven heuristic approximation algorithms for NP-hard problems, allowed for polynomial time approximation at the cost of some accuracy
 - Implemented heuristic solvers for NP-hard problems in Rust, benchmarking over 10 × average speedup over Python-based solver
-

Course Projects & Specializations

Fast and Efficient Digging - Independent Study.

Jun. 2025 - present

- Under Lt. Surge, studied the art of quickly and efficiently digging in a group of 2 peers
- Covered topics including dig latency, pipelined digging, coherent entry and exit holes, maintaining tunnel states, and optimal dig timing
- Created a digging guide which enhances dig speed by nearly 716% for untrained ground types and 495% for all other types

Magnitude 11. Advanced Dig Development

Fall 2023

- Served as Dig Master on a team of 5 ground type engineers to develop the *Magnitude 11* teaching application, which allows the user to reach magnitude 11
 - Performed requirements elicitation and guided beta testing with 17 Vermilion Gym students, forming qualitative and quantitative assessments of user needs and product function
 - Conducted rigorous security testing, identifying and patching 3 security vulnerabilities which allowed attackers to limit viewers to magnitude 3
-

Passion Projects

Mud Bathing.

May 2025 - present

- Bathed in mud for nearly 18 hours per day, 2 days per week over the course of nearly a year
- Convinced nearly 9,000 other Pokémons to bathe in mud, allowing electric types in 5 cities to safely nozzle their trainers

Used ResSpec.

Dec. 2025

- Used ResSpec, an automated resume specializer application written in Ocaml which automatically selects the most relevant portions of a user's work experience and outputs a PDF resume, rendered from Typst code
 - Assembled this resume using ResSpec, implemented using a reduction to the knapsack problem which matches tags of a job to resume experiences based on user-selected skill point investments
-

Skills

- Digging and rock sliding
- Singing