Joseph Gerona

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<u>Education</u>: *University of Washington*

September 2016 - December 2021

Bachelor of Science in Mathematics

Minor in Computer Science and Software Engineering

Through a degree in mathematics and a minor in software engineering, I have knowledge in software design/engineering, physics, and statistics. Due to the nature of mathematics courses, I have developed skills which allow me to break down and interpret technical information into a common, and user friendly language. Other key skills which I have developed here are:

- Object Oriented Programming
  - Java
  - C++
  - Agile/scrum
  - Git
- Statistics
  - R
  - Python
- Data Analysis/algorithm development
  - Matlab

<u>Projects</u>:

Bank account - Data Structures and Algorithms

- Written in C++ on Linux machines which applied topics such as: class designing, queues, and binary search trees.
- Successfully created a banking system in collaboration with 3 other students which allowed for users to transfer, deposit and withdraw money.
- Used Github for collaboration version control

Teaching Computing Concepts - K-12 Computing Education

- Children became able to understand concepts in Object Oriented Programming
- Used MIT Scratch for children to understand data structures and concepts.

Research: The Subgradient Method

I researched algorithms and techniques to implement changes to the subgradient method. I successfully optimized the program to make full use of recursive backtracking and line search. I also made flexible/agile test programs to allow for different scenarios.

- Applied Concepts and tools:
    - Algorithms, Calculus, Non-Linear Optimization, Numerical Analysis
    - Gradient Descent, Backtracking
    - Used LaTex to organize graphs, charts and information in my reports.
    - Used Matlab to execute the algorithms, tests and create graphs.

Work Experience: *MKG Seattle - Children's Martial Arts Instructor*

August 2017 - July 2021

I became a leader, instructor, and influencer for children; helping them develop their physical capabilities while also teaching about respect and discipline. The skills I have practiced here would be:

- Public speaking/presentations
- Customer service/support
- Organization
- Time Management

Responsibilities:

- Administrative work
- Martial arts instructor
- Receptionist

Skills

- Networking, Docker, Kubernetes, Microservices
- Object Oriented Programming - Through courses such as:
    - Data Structures and Algorithms
    - Software Engineering
- PC building
    - Building/maintaining/upgrading custom personal computers since 2018
- Leadership
- Customer Service - Examples:
    - Instructor
    - Admin
    - Receptionist