

MAXWELL VALEK

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Github: Max-Valek

EXPERIENCE AND STRENGTHS

Leadership Collaboration Problem Solving Critical Thinking Open-Minded Student

Goal: To better the lives of others through software and learn as much as possible.

Computer Science BA – University of Minnesota

▪ **Programming experience:**

- Java – Data structures and their implementations, emphasis on algorithm complexity and optimization (optimizing bus usage in Minneapolis with discrete event simulation using queues and priority queues)
- Python – Artificial Intelligence (Solving “Snake” game with the genetic algorithm), basic machine learning implementations
- HTML/CSS/Javascript - Full stack node.js Express application development with Google APIs, JSON/XML, AJAX, SQL, and bcrypt (for passwords) — published with AWS
- OCaml - Functional programming, analysis and manipulation of programs and program structures (converting user input to boolean expressions and solving them, using multisets to calculate similarities of two text files)
- C++ - “Uber” simulation centered around the UMN campus with 3D graphics and various pathfinding algorithms and design patterns.
- C – Pointers, memory allocation on the system stack and heap, relationship with the operating system (Implementing multiple search algorithms and optimizing efficiency with loop unrolling and the utilization of registers, creating and executing subprocesses using a dependency tree, simulating a LCD clock)
- R - Statistics-based programming (program to predict the price of a computer using component price data)
- VBA - Reading in and writing to files in Excel, writing Excel macros
- Assembly (X86-64 AT&T) – Knowledge of the underlying CPU Operations and computer structure

▪ **Other Areas of Knowledge:**

- Math: Calculus 1, Calculus 2, Statistics, Discrete Math, Linear Algebra, Artificial Intelligence, and Machine Learning
- Programming: Algorithms, Operating Systems, Git, Docker, AWS, Google APIs, basics of hashing, encryption, and SQL injection
- Social, Legal, and Ethical Issues in Computing: Extensive research and discussion involving cyberethics, cyberprivacy, and information reliability
- Business: Personal Finance, Accounting, Business Management, Marketing, and Economics

Quality One Automation – Shakopee MN - Summer 2019

- Networking Intern – Onsite installation and maintenance of network cabling, routers, switches, security and audio/video components
- Consumer and Vendor relations – Point of contact for clients and product selection
- Plan Grid Software - Blueprint design for project installations, making and communicating unexpected changes
- Adobe Acrobat – Image design/creation

Teamwork

- Quality One Automation design and installation team – Successfully designed and implemented projects
- Constant collaboration when programming
- Varsity athletic team captain (won 2016 and 2018 state championships)

EDUCATION

2019 - 2022	University of Minnesota	Minneapolis, Minnesota
• 3.5 GPA		
• Deans List		
2018 - 2019	St. Johns University	Collegeville, Minnesota
• 3.9 GPA		