# TIMOTHY METZGER

+1(314) 668-0558 ◇ Eureka, MO
tmetzger8@gmail.com ◇ https://timmetzger.github.io/

## EDUCATION

**M.S. Computer Science**, Georgia Institute of Technology — 2022-2024
Specialization: Interactive Intelligence — GPA: 3.90

**B.S. Mechanical Engineering**, Saint Louis University — 2019 - 2022
Minor in Engineering Mathematics — GPA: 4.0
Summa Cum Laude

**A.S. Engineering Science**, Saint Louis Community College — 2014 - 2018
GPA: 3.90

## SKILLS

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|---|---|
| **Technical Skills** | Python, C++, C#, Java, Jira, Confluence, SQL, Git, MATLAB, MS Office |
| **Libraries** | NumPy, SciPy, Pandas, MatPlotLib, PyTorch, VectorCast, Boost, Junit |
| **Soft Skills** | Problem Solving, Coordination, Communication, Teamwork, Management |
| **Certifications** | Professionally Licensed EIT - MO |

## PROFESSIONAL EXPERIENCE

**Real-Time Software Engineer - F22** — May 2024 - Present
Boeing — *St. Louis, MO*

- Executed a massive system defect burndown effort, reducing the total number of defects by 500+
- Implemented new capabilities into legacy systems containing 1M+ lines of code in Ada and C++
- Performed system validation and verification through extensive testing procedures using C# and VectorCast
- Ensured new code met quality standards and customer requirements through peer review using BitBucket
- Constructed software design documents detailing the code changes needed to implement a software behavior
- Updated proprietary legacy tooling to accommodate new system capabilities and improve user experience
- Managed and coordinated test case issue tracking and resolution across multiple agile teams
- Facilitated efforts towards knowledge transfer, improving team efficiency and effectiveness
- Collaborated with teams across 3+ companies to integrate software with avionics hardware
- Created comprehensive documentation to verify complex system behavior using Confluence

**Algorithmic Stock Trader** — Jan 2019 - Present
Personal — *Eureka, MO*

- Utilized SciKitLearn and Pytorch to develop machine learning based trading strategies
- Created multiple algorithmic trading strategies combining custom indicators with reinforcement learning

**Assistant Manager** — Jan 2014 - Jan 2017
Schnucks — *Eureka, MO*

- Managed employee scheduling and optimized department workflow

## PROJECTS

**N-Directional A* Search for Atlanta.** Implemented a version of N-Directional A* search as a potential solution to the infamous Traveling Salesman Problem. The Algorithm makes use of optimization techniques commonly used for bi-directional pathfinding to provide a solution up to 2x faster than the Held-Karp algorithm.

**Andrew File System.** Implemented a functional replica of an Andrew File System using C++ and gRPC.