

# TIMOTHY METZGER

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## EDUCATION

<b>M.S. Computer Science</b> , Georgia Institute of Technology	2022-2024
Specialization: Interactive Intelligence	GPA: 3.90
<b>B.S. Mechanical Engineering</b> , Saint Louis University	2019 - 2022
Minor in Engineering Mathematics	GPA: 4.0
Summa Cum Laude	
<b>A.S. Engineering Science</b> , Saint Louis Community College	2014 - 2018
	GPA: 3.90

## SKILLS

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

## PROFESSIONAL EXPERIENCE

<b>Real-Time Software Engineer - F22</b>	May 2024 - Present
Boeing	<i>St. Louis, MO</i>

- Executed system defect burndown, reducing the total number of defects by 200+ in eight months
- 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#
- 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 software behaviors
- Updated legacy tooling to accommodate new system capabilities and improve developer efficiency
- Managed and coordinated test case issue tracking and resolution across multiple agile teams
- Administered knowledge transfer sessions to improve 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

<b>Algorithmic Stock Trader</b>	Jan 2019 - May 2024
Personal	<i>Eureka, MO</i>

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

<b>Assistant Manager</b>	Jan 2014 - Jan 2017
Schnucks	<i>Eureka, MO</i>

- 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.