

# TRINADH MUSUNURI

trinadh.musunuri@gmail.com • [www.linkedin.com/in/trinadh-musunuri/](https://www.linkedin.com/in/trinadh-musunuri/) • [github.com/3nadh3](https://github.com/3nadh3) • [www.trinadh.dev](https://www.trinadh.dev)

## EXPERIENCE

<b>Central Michigan University — Research Assistant</b>	<b>Sep 2025 – Present</b>
<ul style="list-style-type: none"><li>Replaced an inefficient evolutionary algorithm with a gradient-based optimization method.</li><li>Achieved <b>50× faster</b> execution by reducing runtime from 30–60 minutes to under 2–3 minutes.</li><li>Built and deployed optimized backend services and experimental pipelines on cloud infrastructure.</li><li>Developed backend modules and APIs to support data processing, experimentation, and performance testing.</li><li>Collaborated with faculty researchers to translate research code into stable, maintainable backend systems.</li></ul>	

## TECHNICAL SKILLS

<b>Programming Languages:</b> Python, Java, JavaScript, C, SQL
<b>Frontend:</b> HTML, CSS, React.js, Bootstrap
<b>Backend &amp; APIs:</b> Node.js, Express.js, RESTful APIs, JWT Authentication, Performance Optimization
<b>Databases:</b> MongoDB, MySQL, Relational Schema Design, Indexing, Query Optimization
<b>Cloud &amp; DevOps:</b> AWS (EC2, S3, IAM, RDS, Lambda, Load Balancing), Google Cloud Platform, Docker, CI/CD, Linux
<b>System Design:</b> Scalable Architecture, Client–Server, Modular Backend Design
<b>Core CS &amp; Tools:</b> Data Structures, Algorithms, Git, GitHub, Postman, Performance Profiling

## PROJECTS

<b>SkillsSwap — Full Stack Skill Matching &amp; Messaging Platform</b>	<b>2025</b>
<ul style="list-style-type: none"><li>Built a full-stack web platform for skill matching, user profiles, and real-time messaging.</li><li>Developed RESTful APIs with Node.js and Express for authentication and platform logic.</li><li>Implemented real-time chat using WebSockets for low-latency communication.</li><li>Designed MongoDB schemas for users, chats, and relationships.</li><li>Deployed backend services on cloud infrastructure with secure configuration.</li></ul>	
<b>Transcripto (M-Sum-PAI) — Cloud-Based AI Summarization Platform</b>	<b>2025</b>
<ul style="list-style-type: none"><li>Built a cloud-based system to summarize text, PDFs, audio, and video content.</li><li>Developed scalable backend services and APIs for file handling and processing workflows.</li><li>Implemented asynchronous processing for large inputs and concurrent users.</li><li>Deployed services on AWS using EC2, S3, and IAM.</li></ul>	

## CERTIFICATIONS

<b>Generative AI Engineering — Google Cloud</b>	<b>Nov 2024</b>
Vertex AI, prompt engineering, model deployment, scalable ML pipelines, cloud-based AI workflows	
<b>AWS Cloud Technical Essentials — Amazon Web Services</b>	<b>Nov 2023</b>
EC2, S3, IAM, RDS, cloud architecture, security fundamentals, high-availability design	
<b>Full Stack Web Development Certification</b>	<b>Aug 2023</b>
HTML, CSS, JavaScript, React.js, PHP, REST APIs, database systems, web application architecture	

## EDUCATION

<b>Master of Science in Computer Science — Central Michigan University</b>	<b>May 2027</b>
College of Science and Engineering	
Relevant coursework: Advanced Algorithms, Cloud Computing, Web Technologies, Machine Learning	