

Joe Mackle

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EDUCATION

University of Florida

Gainesville, FL

- **B.S. in Computer Science**, Minor in Digital Arts & Sciences (GPA: 3.9/4.0) *Aug 2022 - May 2026*
- **Certificates:** NVIDIA Fundamentals of Deep Learning, AI Fundamentals and Applications
- **Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Computer Network Fundamentals

SKILLS

Programming Languages: TypeScript, JavaScript, C#, C++, Python, HTML/CSS, Java

Cloud Providers & Databases: AWS, Microsoft Azure, PostgreSQL, MariaDB

Frameworks: React, Tauri, Svelte

Tools & OS: Git, Visual Studio Code, JetBrains Suite, Vim, ArcGIS Pro, Windows, Arch Linux

EXPERIENCE

Esri

Redlands, CA

Software Developer Intern – Geodatabase Team

May 2026 - August 2026

- Created the SpliceEditor: a React web component for editing fiber optic splice configurations
- Led the UX design process, finalizing a field-optimized workflow tailored for utility technicians with little to no experience using GIS tools
- Engineered API integration logic to traverse Utility Network fiber associations in telecom domain networks
- Spearheaded biweekly technical presentations and design discussions for a cross-functional intern team
- Contributed production code through enterprise Git workflows

PROJECTS

Esri's Weekend of Innovation GeoPulse

Intern Hackathon

Backend Developer (APIs and integration)

July 24-26, 2026

- Led development of GeoPulse, an ArcGIS Experience Builder app
- Forecasted EMS demand using historical NFIRS incident data, spatial analysis, and OpenAI models
- Designed a decision-support system that recommends proactive ambulance staging locations
- Advanced to semifinals and presented the project to over 600 Esri employees and industry guests
- Garnered attention from the U.S. Fire Administration, a division of the FEMA

Metis

University of Florida Senior Project

Frontend Developer

January 2026 - April 2026

- Built a React/TypeScript Tauri desktop UI for a PDF document research assistant
- Engineered responsive frontend for a multi-component AI system (Python RAG backend, Rust type layer, React UI) handling PDF ingestion, embedding, retrieval, and real-time LLM agent streaming

The Scenic Route scenicroutes.app

Personal Project

Solo Developer

June 2025 - August 2025

- Designed and implemented a social mapping application, giving drivers alternate route suggestions focused on picturesque surroundings
- Used SvelteKit and MapLibre GL for the frontend and constructed a scalable PostgreSQL + Drizzle ORM backend to store route geometries
- Efficient geospatial queries, user-level filtering, dynamic aggregation of statistics
- Engineered a user experience around crowdsourced spatial data, bridging GIS and community