Daniel M. George

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Education

University of Florida — Gainesville, FL
Bachelor of Science in Computer Science, Minor in Public Health — *Expected Graduation: Dec 2026*

Experience

Incoming Software Engineer Intern — Jun. 2025 - Aug. 2025
Intradiem — *Marietta, GA*

Software Engineer — Sep. 2024 - Present
Patent-It AI — *Gainesville, FL*

- Led the implementation of the company application using **Next.js**, and **Typescript**, helping secure over **$30,000** in investment and growing clientele by **40%**.
- Implemented CI/CD pipeline using **GitHub Actions**, **AWS Step Functions** for data processing, and **Docker/ECS** for deployment, reducing manual operations time by over **80%**
- Developed and optimized **30+ AWS Lambda** functions, leveraging **Lambda layers** and data caching using **Redis** to increase processing speed by over **25%**, resulting in **12%** reduction in total business costs.

Full-Stack Software Developer — Jun. 2024 - Present
University of Florida College of Medicine — *Gainesville, FL*

- Develop and deploy **12+** full-stack applications, including data visualization tools using **React** and **Node.js**, significantly improving UI/UX and **increasing shareholder appreciation by over 50%**.
- Optimize retrieval queries from an **Oracle SQL DB**, reducing latency for large datasets from **5s** to under **2s**.
- Engineer optimized **Fastify** endpoints for applications, leveraging server-side rendering (SSR) and data caching using **Redis**, minimizing payload sizes and delivering **sub-50ms** response times.

Machine Learning Undergraduate Research Assistant — Dec. 2023 - Present
University of Florida Department of Health Outcomes and Biomedical Informatics — *Gainesville, FL*

- Fine-tuned deep learning model for predicting protein-peptide binding sites, reducing loss by **30%** by implementing **self-attention mechanism's** and a **Boosted Mask BCE loss function** in **Keras**.
- Automate training and data processing workflow using **Docker** and **SLURM** on **UF HiperGator**.
- Developed an NLP model with **spaCy** to classify bottle feeding methods using **3,000+ clinical notes**, achieving over **93% precision** with a **RandomForest classifier**, reducing documentation time by over **60%**.

Software Member — Aug. 2024 - Present
Dream Team Engineering — *Gainesville, FL*

- Implemented fine-tuning techniques for **Wasserstein** and **Progressive GANs** such as progressive growing and perceptual loss in **PyTorch** to **reducing the CT scan reconstruction loss** by **11**%.
- Improved **gradient control** with penalty adjustments and adaptive learning rates, which helped keep the Progressive GAN stable and made the CT scans look more realistic.

Research Intern — Aug. 2024 - Dec. 2024
University of Florida Department of Plant Pathology — *Gainesville, FL*

- Developed network analysis models using **igraph** and **networkD3** in **R** with adjacency matrices, achieving **87%+ AUPRC** in pinpointing high-risk frosty pod disease zones in the Caribbean.

Projects

Custom Web Server & Analytics Dashboard | *Golang, PostgreSQL, React, GCP* — Mar. 2025

- Engineered a **multi-threaded HTTP server** from the socket layer (Layer 4), supporting raw TCP connections, HTTP parsing, request routing, rate limiting, and a thread-safe **LRU cache with TTL**.
- Served a self-hosted **React analytics dashboard** on the server, visualizing metrics logged in **PostgreSQL** including request volume, cache hit ratio, average response latency, and per-route access patterns.

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, Golang
Frameworks: React, React Native, Next.js, Node.js, FastAPI, Fastify, Flask
Technologies: AWS, Redis, Docker, Git, SLURM, PyTorch, TensorFlow, pandas, numPy
Databases: PostgreSQL, Oracle SQL, MongoDB