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: May 2026*

Experience

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

- Develop and deploy **6+** full-stack web applications and data visualization dashboards using **HiperGator**, **React JS**, and **Node JS**, significantly improving UI/UX and **increasing shareholder appreciation by 30%**.
- Engineer and optimize **data pipelines**, automating **SQL queries** to extract and preprocess critical data for applications from an **Oracle SQL DB**, improving data retrieval times by over **20%**.

Undergraduate Research Data Analyst — Mar. 2024 - Present
University of Florida Department of Health Outcomes and Biomedical Informatics — *Gainesville, FL*

- Trained a **deep learning neural network** with **PyTorch** for early detection of hypertensive disorders in pregnant women based on EHR data with over **96.5% accuracy** serving the basis of a upcoming research publication.
- Complete **data analysis** on over **600,000** electronic health records (EHR) from UF Health, summarizing the data into a **data dictionary** to help understand the effects of obesity and hypertension on pregnant women.
- Developed a **natural language processing (NLP) model** using **spaCy** to automatically detect feeding methods from over **3,000 clinical notes**, achieving **93% accuracy** with a **RandomForest classifier**, reducing UF Health physician paperwork time for relevant documentation by over **40%**.

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

- Reprogrammed and fine-tuned the **CAMP AI model**, a deep learning framework for predicting peptide-protein interactions, by using **Keras** to resolve bugs and **increase the accuracy** from the original model by **2%**.
- Streamlined CAMP **data pipe-lining** process using **UF's supercomputer** and **Nextflow**, enhancing processing efficiency by over **100%** and **dockerizing** the enviroment to ensure compatibility across all operating systems, including Linux, leading to optimized use for external researchers.
- Utilize the refined model to understand the effects of the GLP-1(Ozempic) peptide on pregnant women.

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

- Develop and optimize network analysis models to track the source of frosty disease in cacao pods using **R**, aiming to significantly reduce the prevalence of the disease in the Caribbean.
- Integrate epidemiological model results into visuals using **ggplot2**, significantly enhancing scientific papers.

CT-GAN Developer — Sep. 2024 - Present
Dream Team Engineering — *Gainesville, FL*

- Implement fine-tuning techniques for **Wasserstein** and **Progressive GAN's** such as progressive growing and perceptual loss to **reduce the loss of GAN-generated CT scans** by **11**%.
- Investigate methods like **noise injection, learning rate schedules, and attention mechanisms** to optimize model convergence, to **reduce training time** and **improve realism** of generated CT scans.

Projects

Finance App | *PyTorch, React, Flask, AWS S3* — Aug. 2024

- Developed a credit card fraud detection model using a **Keras SVC** and **GBoost**, to achieve an **AUPRC** of **98.7%** on over **275,000 transactions, storing the data in an AWS S3 bucket**.
- Utilized **BERT** to classify purchases into spending categories, allowing for better comprehension of data.
- Engineered a real-time data visualization dashboard using **React** and **Typescript** to display model results.

Technical Skills

Languages: Python, C/C++, JavaScript, TypeScript, HTML/CSS, Java
Frameworks: React, Node.js, Flask, FastAPI, Django
Libraries: pandas, NumPy, scikit-learn, Matplotlib, SQL, Angular, Oracle, Torch, SpaCy, NTLK, Tensorflow, Keras
Cloud Frameworks: Azure, AWS, Google Cloud, NVIDIA GPU Cloud