# Laurynas Lukas Kanopka

Naperville, IL

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## Summary

Software Engineer with expertise in backend development, specializing in optimizing API response times and data serialization. Successfully led the migration of a legacy client portal to a modern stack, improving performance by 40%. Seeking to leverage backend development skills in a Backend Engineer role.

## Education

**University of Florida, Herbert Wertheim College of Engineering** **May 2026**

*Bachelor of Science, Computer Science, Minor in Statistics*

- **GPA:** 3.96
- **Coursework:** Natural Language Processing, Algorithm Abstraction & Design, Data Structures Algorithms, Design of Experiments, Statistical Modeling, Regression Analysis, Operating Systems

## Technical Skills

- **Languages**: Python, Java, C++, SQL, R, JavaScript
- **AI & Machine Learning**: PyTorch, Scikit-learn, Pandas, NumPy, NLTK, SpaCy
- **Web Development & Frameworks**: FastAPI, Flask, React, Vue.js, Node.js, Pydantic, SQLAlchemy
- **Developer Tools & Cloud**: Git, Docker, Google Cloud (Gemini API, OAuth), DigitalOcean, Netlify, Jira, Agile (Scrum)

## Work Experience

**Swimage** **Aug 2025 - Present**

*Software Engineer* *Remote*

Company providing OS imaging and disaster recovery solutions

- Spearheaded the backend migration of a legacy client portal to a modern Vue.js and FastAPI stack, improving API response times by 40% through optimized SQL queries and efficient Pydantic data serialization.

**Swimage** **Jun 2025 - Aug 2025**

*Full Stack Software Engineer Intern* *Naperville, IL*

- Architected a Python data pipeline and routing interface to evaluate multiple providers (Google Gemini, OpenRouter), enabling A/B testing of fine-tuned prompts and selecting the optimal classification model
- Reduced manual work time for software classification by 80% by architecting an automated Python data pipeline that processed, classified (via LLM), and inserted results into an MS SQL database.
- Designed and implemented a secure, multi-tenant authentication system using FastAPI and JWTs, employing a bitmask-based permissions model for efficient and scalable role management

**ClipAndTrim.io** **Mar 2025 - Aug 2025**

*Freelance Full Stack Developer* *Remote*

Contract project for a client based in the Netherlands

- Owned the end-to-end development and successfully delivered a full-stack web application, enabling users to create, preview, and download clips from any YouTube video via timestamps.
- Architected a robust Python/FastAPI backend using yt-dlp/FFmpeg, deployed on DigitalOcean and leveraging Beam.cloud for GPU-acceleration, ensuring video encoding completes 20x faster than CPU-based processing.
- Implemented a responsive React/TypeScript frontend with seamless Stripe and Google OAuth integration, processing all user data and payments securely through a Supabase database.

## Software Development Projects

**Gator Beach Volleyball Tournament App**

- Spearheaded the digital transformation of the organization's tournament operations by replacing a manual, paper-based system with a centralized web application, eliminating the need for physical scorecards and providing 100 monthly players with real-time access to schedules, pools, and live standings.
- Increased tournament management efficiency by over 90% by automating logistical tasks such as player imports, scheduling, and bracket generation with a centralized Vue.js and Supabase application.

**Programming Language Design and Implementation**

*University of Florida*

- Implemented a complete, statically-typed programming language in Java, featuring a lexer, recursive-descent parser for AST generation, type analyzer, tree-walk evaluator, and a code generator targeting Java.

**Generative Pretrained Transformer (GPT) Model**

- Constructed a GPT model from scratch in PyTorch based on the "Attention Is All You Need" paper, implementing core mechanisms including multi-head self-attention, positional encoding, and masking.
- Improved model generalization and reduced validation loss by 15% through strategic application of batch processing and dropout regularization.

## Certifications

- **Supervised Machine Learning: Regression and Classification:**DeepLearning.AI & Stanford via Coursera