Laurynas Lukas Kanopka

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Summary

Software Engineer with a focus on backend development using Python and FastAPI. Successfully led the migration of a legacy client portal to a modern stack, improving API response times by 40%. Seeking to leverage backend expertise in a Backend Engineer role to build scalable and efficient systems.

Education

University of Florida, Herbert Wertheim College of Engineering **May 2026**
Bachelor of Science, Computer Science (GPA: 3.96) *Gainesville, FL*

- **Achievements:** Cumulative 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
- **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), Neo4j
- **AI & Machine Learning:** PyTorch, Scikit-learn, Pandas, NumPy, NLTK, SpaCy

Work Experience

Swimage | *Software Engineer* **Aug 2025 - Present**

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 | *Full Stack Software Engineer Intern* **Jun 2025 - Aug 2025**

- Engineered a scalable data pipeline in Python for a core classification feature, integrating multiple third-party LLM APIs (Google Gemini, OpenRouter) to improve system accuracy and processing speed
- Reduced manual work time for software classification by 80% by architecting an automated Python data pipeline that processed, classified, 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 | *Freelance Full Stack Developer* **Mar 2025 - Aug 2025**

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

SkillShare - GrahRAG People Search Engine - Hackathon Astera Labs Nebula Challenge 1st Place | skillshare.dev
UF Open Source Club Minihack

- Led a team of 4 and built a full-stack, serverless application that transforms unstructured documents into a searchable knowledge graph using GraphRAG to identify experts based on their experience.
- Developed a Python-based data ingestion pipeline using Google Gemini and OpenRouter for text embedding, and Neo4j for graph and vector storage, resulting in a system capable of handling diverse file types at scale.

Gator Beach Volleyball Tournament Hosting and Management App | gatorbeachvolleyball.com
Gator Beach Volleyball

- 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.

Generative Pretrained Transformer (GPT) Model

- Developed a fully functional GPT model from scratch in PyTorch, translating the "Attention Is All You Need" research paper into a modular and well-documented codebase.
- Engineered an efficient training loop with batch processing and dropout regularization, resulting in a 15% reduction in validation loss and improved performance.

Certifications

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