SAMANTHA LAVRINC

Pittsburgh, PA • 412-328-1006 • sLavrinc@gmail.com
www.linkedin.com/in/slavrinc

SUMMARY

Software Engineer with 4+ years of experience designing backend systems, clinical NLP solutions, and full-stack web applications. Experienced in system architecture, data modeling, and translating complex domain knowledge into scalable software solutions. Founder of Castle Logic LLC, partnering directly with clients to design and develop custom software.

TECHNICAL SKILLS

- Languages: Java, Python, JavaScript, TypeScript, SQL, HTML/CSS
- Frontend: React, Vite, Tailwind CSS
- Databases: PostgreSQL, Supabase
- Healthcare & NLP: cTAKES, FHIR/HL7, SNOMED CT, LOINC, RxNorm, ICD-10, ICD-O, Regex
- DevOps & Cloud: Git, GitHub, Docker, Azure DevOps, AWS, Vercel, CI/CD, YAML Pipelines
- Testing: JUnit, Cucumber, Groovy
- Collaboration: Jira, Confluence

WORK EXPERIENCE

Founder & Software Engineer, Castle Logic LLC **Oct 2025 - Present**

- Architected and developed a relationship mapping platform for therapists, translating client requirements into a scalable graph-based web application.
- Designed the system architecture, relational database schema, and graph data model to represent and visualize complex interpersonal relationships.
- Implemented application architecture, graph data layer, and database operations using React, PostgreSQL, and Supabase.
- Partnered directly with clients to define requirements, prioritize features, and deliver iterative software solutions aligned with business objectives.
- Led end-to-end software development from architecture through deployment.

Software Engineer, NLP & Clinical Informatics - Realyze Intelligence **Oct 2022 - Oct 2025**

- Maintained and enhanced a multi-layer clinical NLP pipeline using Java, PostgreSQL, and cTAKES to transform unstructured medical records into FHIR-compliant JSON.
- Designed and implemented extensible NLP components, inference engines, and structured data models to improve rule-based extraction, cross-entity reasoning, and clinical data processing.
- Designed and presented an alternative clinical data architecture for scalable patient-history querying and cross-encounter reasoning.
- Assumed ownership of critical pipeline components following senior departures, maintaining clinical logic, expanding JUnit test coverage, and ensuring reliable processing across thousands of patient records.
- Partnered with the Chief Medical Officer to translate oncology trial protocols into technical requirements and clinical trial matching logic.

Software Engineer Intern, UPMC Information Services **Jun 2021 - Aug 2021**

- Redesigned Azure DevOps CI/CD pipelines, migrating Classic pipelines to YAML for production and review workflows.
- Contributed to Agile healthcare software development using Azure DevOps, C#, and HIPAA practices.

EDUCATION

B.S. Computer Science - University of Pittsburgh **Sep 2020 - Aug 2022**
A.S. Computer Information Systems - CCAC **Aug 2019 - Aug 2020**