Samuel Laki

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EDUCATION

Columbia University   **Fall 2021 - 2025**
- Bachelor's Degree in Computer Science (Kenneth P. Scheffel Scholar)
  - Coursework: UI Design, AI, Distributed Systems, Intro to Databases, Data Structures in Java, and NLP

PROFESSIONAL EXPERIENCE

Annalect   **June 2024 - August 2024**
Software Development Intern
- Developed a predictive model for the Omni platform, utilizing AI to analyze behavioral patterns, purchase frequency, and engagement metrics, which helped to identify churn risks and inform more targeted user retention strategies.
- Optimized content portal with lazy loading, reducing load times, leading to a noticeably smoother user experience.
- Refined data processing workflows, improving efficiency and enhancing the platform's ability to maintain consistent performance during periods of increased traffic.

Columbia College IT   **August 2024 - May 2025**
Client Services Intern
- Resolved hardware and software issues, reducing system downtime and boosting productivity for administrative units.
- Assessed IT needs and delivered tailored solutions that enhanced workflow efficiency for administrative clients.
- Performed system audits and maintenance, ensuring optimal performance and proactive issue resolution.

BigCommerce   **June 2023 - August 2023**
Financial Operations Intern
- Executed operational analysis for an enterprise-wide audit of all contracts on a team of 8 people.
- Proposed an AI tool that automates contract data analysis using machine learning utilizing a tech stack with Kubernetes and Python, designed to enhance scalability, data processing, and real-time insights for financial operations.

Favor Delivery   **Jun - Jul 2021 & Jun - Jul 2022**
Software Engineer Intern
- Led migration from Core API to Manage Supply API (PostgreSQL), slashing query latency by 95 % to less than 200 ms.
- Built Kotlin REST API endpoint that tripled market-health data retrieval speed, giving ops real-time visibility.
- Created Micronaut + Kafka service that preserves chat-event history; reduced agent miscommunications by 40 % in a week.
- Implemented a Kafka consumer for past, present, and future event tracking, significantly minimizing communication errors.
- Integrated Twilio Conversations for reliable delivery across 100 k+ daily messages.

Columbia University   **February 2022 - April 2022**
NLP Research Assistant
- Utilized Scrapy to extract web data, amassing a large dataset of tobacco-related text, emphasizing NLP data gathering skills.
- Applied NLTK for textual data processing, analyzing digital discourse around various tobacco terms
- Developed an interactive dashboard with Dash to deliver insights for health advocacy policy in the tobacco control sector.

PERSONAL PROJECTS

DiagnosAI | Python, TensorFlow / Keras, NumPy & Pandas, Augmentor, and Matplotlib   **April 2025 – July 2025**
- Built an end-to-end cancer detection model: shipped a TensorFlow/Keras CNN that learned from 2,357 dermoscopic images.
- Engineered a convolutional neural network in TensorFlow/Keras to classify dermoscopic images for melanoma screening, increasing validation accuracy from 26.1% on raw data to 85.5% after class rebalancing.
- Made an image-augmentation pipeline with Augmentor to mitigate data imbalance and improve model generalizability.

TECHNICAL SKILLS

Programming Languages: Python, Javascript, Typescript, Kotlin, SQL/PostgreSQL, C, HTML, CSS, and Bootstrap
Frameworks: React, Node.js, Next.js , Flask, Django, and Fast API
Development Tools: Git, Docker, AWS, Postman, Jira, Kafka, Twilio, Google Cloud Platform, VS Code, PyCharm, and IntelliJ
Libraries: Pandas, NumPy, TensorFlow, PyTorch, SpaCy, Scikit-learn, and Matplotlib

EXTRACURRICULARS

National Society of Black Engineers   **August 2023 - May 2024**
Mentor
- Served as a mentor, providing guidance and support to 3 underclassmen undergraduate students through professional and academic development.