Claudio Perinuzzi

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EDUCATION

Queens College, City University of New York *GPA: 3.85/4.00*
Master of Arts in Computer Science May 2025
Bachelor of Arts in Computer Science December 2024
Stony Brook University, State University of New York
Bachelor of Science in Biology May 2019

TECHNICAL SKILLS

Programming/Databases: Python, SQL (PostgreSQL, MySQL), Java, C/C++, JavaScript, HTML/CSS, XML
Frameworks: React, Streamlit, FastAPI, SQLAlchemy, Pandas, NumPy, PyTorch, JUnit, Unittest, Scikit-Learn
Tools: AWS (EC2), Git, GitHub, Jira, Maven, Docker, Conda, Unix, Bash, Tableau, eClinicalWorks (EMR)

EXPERIENCE

Software Application Analyst/Programmer May 2016 - Present
East End Hand Surgery *Port Jefferson, NY*

- Design, build, implement, test and modify custom graphical user interfaces (GUIs) written in Python that seamlessly integrate with EMR systems to automate healthcare workflows, saving end-users 14+ hours weekly.
- Translate business requirements into technical solutions, identifying and implementing existing software where possible, and developing custom applications for specific niche problems.
- Serve as a primary Application Analyst and EMR Administrator, overseeing all application configurations, workflow optimization, and user access control to ensure seamless clinical and business operations.
- Create and manage comprehensive documentation for custom Python applications and EMR system configurations, and provide training to ensure end-user proficiency and streamlined workflows.
- Manage multiple simultaneous application projects throughout the Software Development Lifecycle (SDLC), including application development/integration, system upgrades, and data migration initiatives, effectively prioritizing work assignments to meet critical deadlines.
- Act as the key liaison for clinical staff, the EMR provider and third-party vendors, proactively troubleshooting issues, coordinating system updates, and championing new features that directly improve operational efficiency.
- Manage 2+ TB of sensitive patient records, ensuring data integrity, security, and adherence to HIPAA compliance through robust backup protocols and data management best practices.
- Led the successful reorganization and modernization of the company's digital file structure, including the migration to an optimized, centralized storage solution, which reduced data storage and retrieval time by 50% and directly contributed to increased productivity.

Machine Learning Specialist - LLM Training & Debugging April 2024 - Present
Data Annotation Tech *New York, NY*

- Debug and optimize code to effectively train and enhance large language model (LLMs) responses.

Software Engineering & Data Science Fellow July 2024 - May 2025
CUNY Tech Prep *New York, NY*

- Selected for a highly competitive year-long fellowship applying modern software engineering practices and system design principles to develop full-stack solutions, utilizing version control and adhering to the SDLC.
- Applied machine learning and data engineering techniques such as, data extraction, data cleaning, exploratory data analysis (EDA), statistical modeling, data visualization, model evaluation and optimization.

PROJECTS

C-Sphere | GitHub Repository May 2025

- Collaborated with a team of 3 to build a full-stack web app, accessible via a Chrome extension that intelligently summarizes, organizes and helps users rediscover saved bookmarks through advanced search capabilities.
- Engineered a Retrieval-Augmented Generation (RAG) backend pipeline by combining intelligent content summarization, semantic vector search, and embedding-based storage/retrieval using PostgreSQL, resulting in optimized user data storage and intelligent content querying.

Breathe NYC | GitHub Repository | Live Demo September 2024

- Developed a Python Streamlit web app using NYC OpenData public datasets to visualize, analyze, and predict yearly/seasonal AQI (Air Quality Index) trends for NYC neighborhoods, achieving 97% accuracy.
- Leveraged pandas and scikit-learn to build a data cleaning and linear regression machine learning pipeline, delivering actionable insights from raw data via an intuitive interface for critical decision support.

MindfulNet AI | GitHub Repository | Live Demo May 2024

- Implemented a full stack web application using React that predicts social media addiction based on user input and offers personalized healthy habit recommendations given user interests and location.
- Built, trained and rigorously tested a backend Random Forest machine learning model in Java to predict social media addiction that achieves 98% accuracy, ensuring accurate and reliable results.

PDF Encrypt | GitHub Repository July 2023

- Developed a Python-based Graphical User Interface (GUI) featuring drag-and-drop support for efficient, simultaneous encryption of multiple PDFs, enabling users to securely encrypt files in bulk and save time.