

THOMAS TSANGOU

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SUMMARY

Detail-oriented Computer Scientist and Data Engineer with hands-on experience in predictive modeling, automation, and infrastructure. Proven ability to take projects from conception to completion, including architecting on-premise cloud systems and developing machine learning models. Eager to apply skills in Python, Linux, and MLOps to build robust data solutions.

EDUCATION

Hunter College/CUNY New York, NY <i>Bachelor of Arts, Computer Science, Minor in Mathematics</i>	Aug 2020-Dec 2026
NYC College of Technology/CUNY Brooklyn, NY <i>Associate of Applied Science, Computer Systems Technology</i>	Aug 2017-Aug 2020

SKILLS

- **Data Science & Machine Learning:** Predictive Modeling, ETL, Data Pipelines, Feature Engineering, Exploratory Data Analysis (EDA), Data Quality Validation (GX Core)
- **Infrastructure & Networking:** Linux System Administration (Ubuntu), Reverse Proxy, DNS Management, VPN Configuration, SSH Hardening, Docker Orchestration, Apache Airflow (DAGs)
- **Programming & Databases:** Python (Pandas, Scikit-learn, NumPy), R, C++, SQL, Node.js, Next.js, Git version control, TypeScript, Bash, PostgreSQL
- **Tools:** Power BI, IBM Cloud, IBM Guardium, Streamlit, Microsoft Excel, IBM WatsonX

EXPERIENCE

IBM Corporation Data Engineering Intern	Feb 2023-Jan 2024
• Automated onboarding of 10,000 databases into IBM Guardium using Python scripting and REST APIs, streamlining repetitive tasks. • Developed a Power BI project to integrate Python Scripts for team-wide deployment, improving data processing and reporting efficiency. • Enhanced data analysis capabilities by generating detailed reports with pandas, and automating Excel interactions using pywin32.	
IBM Corporation Talent Acquisition Intern	Jun 2022-Dec 2022
• Collaborated with key stakeholders and a team of software developers to design, implement, and maintain new features for the Select for IBM (SFI) software. • Managed and optimized a Cloudant (NoSQL) Database using TypeScript, ensuring efficient data handling and robust error management.	
Work Ed Program Lead	Jan 2024-Present
• Developing and delivering lessons on AI concepts and chatbot development to over 100 students. • Translated complex technical requirements into engaging learning modules, coaching students on creating AI-powered chatbots with IBM WatsonX Assistant.	
Morrison Mentors Lead Instructor	Nov 2024-Present
• Led STEAM education programs across four school locations, delivering engaging, hands-on classes to over 100 students in robotics, programming, and web design. • Guided students and Junior instructors in applying the scientific method to structure, lifestyle, and interpret data sets for hypothesis testing. • Acted as the primary point of contact for workshop logistics, managing equipment, materials, and learning environments for the team.	

LEADERSHIP & PROJECTS

Headstarter AI Software Engineering Fellow	Jul 2024 - Present
• Participating in a 7-week remote fellowship focused on building 5 AI projects and a capstone project.	
Football Analytics Engine (FAE) Lead Developer & Architect	July 2024-Present
• Architected a modular analytics platform using Docker to orchestrate PostgreSQL, Streamlit, and ETL workers, ensuring a scalable microservices environment for sports data processing. • Engineered automated ETL pipelines via Apache Airflow (DAGs), utilizing Selenium and Headless Chromium to extract multi-season player and squad metrics from FBRef while bypassing anti-bot measures. • Integrated MLOps best practices by enforcing data quality through GX Core (Great Expectations) and deploying predictive models to identify top-performing players and squads.	
On-Premise Private Cloud Infrastructure System Architect	Jun 2025-Present
• Provisioned and hardened a bare-metal Ubuntu Server on workstation-class hardware (i7 vPro, 32GB RAM), enforcing strict SSH key-based authentication access controls. • Architected a secure remote network layer utilizing Cloudflare Tunnels and Zero Trust Access policies to mandate identity-based authentication (OTP) for internal admin panels. • Orchestrated containerized services via Docker/Portainer and bridged Ollama-hosted local models (Qwen, Llama) to agentic IDEs via custom OpenAI-compatible API endpoints.	