

Diego Troy Lopez

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About

Full-stack Software engineer with experience in designing and implementing systems, network and distributed solutions from scratch. Excellent productivity output, leadership skills w.r.t. organization, project management. Looking for full-time positions at the end of current contract. **"How you do anything is how you do everything"**.

Education

New York University | Computer and Data Science, B.A. 2019 - 2023

- Minor in Cybersecurity
- **4x Dean's list Award, Cum Laude, ACT: 34** (top 2% nationwide)

New York University | Cybersecurity, M.S. 2023 - 2025

- Cyber Fellows student in part-time Master's program

Certifications

CompTIA Network+ (ID: W3SJPVQYD2B11T3D) | **CompTIA Security+** (ID: DTBV8KHYYJM411LWS)

Technical Skills

- **Languages:** Python, SQL, Bash, Java, YAML, C/C++, Scala, Golang, Pwsh, MATLAB
- **Concept Areas:** Network Security, System Administration, System Security, Network & System Automation, Data Engineering, Intrusion Detection, NIST CSF, DevOps, MLOps, Malware Analysis, Network Engineering
- **ML Tools:** Scikit-learn, H2O, Tensorflow, Ray, Spark (MLlib, Streaming), MLflow, PyTorch, Kubeflow
- **Cybersecurity & IT Tools:** Zeek, Docker, Kubernetes, Ansible, Kafka, ELK, Splunk, InsightVM, LibreNMS, Netbox IPAM, Packetfence Panda.re, Metasploit, ZAP, Cortex XDR

Work Experience

Research Network Engineer | *NYU Research Technology Svcs* May 2023 - PRESENT

- **Architect, implemented network & systems monitoring solution** with high performance Zeek (PF_RING, XDP), E/W & N/S monitoring (SPAN, ERSPAN), SNMP with NMS, Syslog pipelines with ELK and Splunk
- **Implemented network security** with Dot1x, network ACLs (Arista, SONiC), AI assisted intrusion detection
- **Developed automation scripts** for network device deployment, system deployment and tasks using Ansible
- **Developed novel research workflows** and case studies leveraging Kubernetes, Stream Processing

Program Lead | *NYU Research Technology Svcs* Aug 2022 - May 2023

- **Led interdisciplinary program of 30 Students** in software development for Research Technology
- **Architect, implemented** scalable organizational structure that allowed 50% headcount increase
- **Led research team** of 4 Master's students in development of ML & DL methods for Network Intrusion Detection

IT Technician | *NYU IT* Sep 2019 - Aug 2022

- **Imaged, installed and maintained IT systems** including desktops, laptops, servers, etc
- **Managed IT infrastructure** including Asset tracking, UEM & Device configurations, DNS
- **Provided technical support** for end-user requests including pswd resets, MFA, IT systems, Windows/Mac, AV

Research Assistant | *NYU Fox Lab* Sept 2021 - Apr 2022

- **Assisted with designing, performing experiments** analyzing personality association with music
- **Created pipelines, visualizations, analyzed results** with statistical tests using Python, MATLAB

Projects

IoT-23 Analysis | *Capstone Analysis on Cybersecurity Dataset* 2023

- Evaluating assay of supervised, unsupervised, deep learning techniques for malicious network flow prediction
- Used feature engineering to enhance classifiers using domain specific knowledge from networking, cybersecurity

Kubernetes Cluster | *Self Managed Compute Infrastructure* 2023

- Self managed cluster for cybersecurity projects, tests, and research

Courses

Calculus I & II | Algorithms | Intro. to Machine Learning | Advanced Deep Learning | Processing Big Data
Penetration Testing & Vulnerability Analysis | Application Security | Computer Security | Network Security