# Diego Troy Lopez

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## About

Full-stack software engineer with experience in designing and implementing systems, network and security solutions from scratch. Excellent productivity output, leadership skills in organization, project management. Looking for challenging positions in Infrastructure after 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 | University Honor's Scholar | Cum Laude**

**New York University** | Cybersecurity, M.S.                    2023 - 2025
- Part-time Master's student | GPA: 4.0

**Certifications**
**CompTIA Network+** (ID: W3SJPVQYD2B11T3D) | **CompTIA Security+** (ID: DTBV8KHYJM411LWS)

## Technical Skills

- **Languages**: Python, SQL, Bash, Java, C/C++, HTML/CSS, Scala, Golang, Pwsh, MATLAB
- **Concept Areas**: Systems Engineering & Administration, Network Engineering, Machine Learning Engineering, Automation, Data Engineering, DevOps, Stream Processing, Network Security, Malware Analysis

## Work Experience

**Research Network Engineer** | *NYU Research Technology*                    May 2023 - PRESENT
*Arista, Cisco, Linux, Splunk, Ansible, Zeek, Kubernetes & Docker, FreeRADIUS, Python, Bash*
- Served as sole UNIX administrator of 40 node Kubernetes cluster, deployed 20+ servers remotely at various sites
- Managed and troubleshot enterprise network of 70+ switches, planned and deployed 3 additional sites remotely
- Architected and implemented data pipelines, monitoring, visualizations and alerting for network devices and servers (Syslog, SNMP, Traps, NS-EW Monitoring with SPAN, ERSPAN, Splunk, LibreNMS)
- Developed and implemented automation scripts for network & system deployment, general tasks using Ansible
- Advocated for creation of, and wrote entirety of user-facing documentation

**Network Engineer Intern & Student Lead** | *NYU Research Technology*                    Aug 2022 - May 2023
*Organizational Leadership, Linux, Zeek, LibreNMS, Ansible, Python*
- Led recruiting, marketing, operations, project management, finance, vision for 30 student internship program
- Architect, implemented scalable organizational structure that allowed 50% headcount increase
- Led technical projects in network automation, NMS implementation and network security monitoring

**IT Enginer Intern** | *NYU IT*                    Sep 2019 - Aug 2022
*WS ONE, Service Now, Windows Enterprise, Cortex XDR, InsightVM, Powershell, Bash*
- 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

## Projects

**IoT-23 Analysis** | *Capstone Analysis on Cybersecurity Dataset*                    2023
*PyTorch, Scikit-Learn, PyOD, PySAD, Kubernetes, MLflow, Python*
- 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

**Data Processing for Neural-Controlled Environments** | *NYU Dept of Neural Science*                    2023
*Kafka, Kubernetes, C++, Python*
- (W.I.P.) Technical lead for closed loop research prototype using real-time data processing allowing rats control to their environment using only neural signals ("mind control")

## Research & Publications

**Always Be Pre-Training:** Representation Learning for Network Intrusion Detection with GNNs
**Towards Intelligent Online Intrusion Detection Systems in Programmable Networks**
- (W.I.P.) Principal Investigator on using SDN for bandwidth efficient NIDS guided by Unsupervised Learning