

Landon Spitzer

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EDUCATION

Rochester Institute of Technology

Master of Science in Computer Science

Rochester, NY

Aug. 2021 – May 2026

Rochester Institute of Technology

Bachelor of Science in Computer Science - Combined Accelerated BS/MS

Rochester, NY

Aug. 2021 – May 2026

EXPERIENCE

Allegis Group

Software Engineering Intern (Co-op)

Hanover, MD

June 2024 – December 2024

- Developed custom **Salesforce solutions using Apex**, addressing user stories and defects, and enhancing workflows
- Collaborated within a **SAFe Agile framework**, participating in daily ceremonies to ensure the delivery of high-quality solutions

Allegis Group

Data Scientist/Analyst/Engineer (Co-op)

Hanover, MD

June 2023 – August 2023

- Applied skills in data science and analysis to implement high-quality solutions, including working with AI labeling models and achieving over **94% prediction accuracy**
- Collaborated within an Agile software development team, developing and validating predictive interest models using **Vertex AI** on **Google Cloud Platform**

PROJECTS

Federated Learning on RetinaMNIST (Medical Image Classification) | *Python, PyTorch, Flower* Fall 2025

- Designed and implemented a **federated learning process** using **Flower** to train on the RetinaMNIST dataset across **non-IID clients**
- Evaluated and analyzed convergence behavior and accuracy degradation relative to centralized training under **federated aggregation**
- **Simulated adversarial clients** through label-flipping attacks and **applied PID-based anomaly detection** to identify and mitigate malicious global model updates

BEiT vs. MatchNet (Deep Learning for Image Similarity) | *Python, PyTorch, Tiny ImageNet* Spring 2025

- Developed and evaluated two deep learning models, **MatchNet** and pretrained **BEiT**, to classify image pairs as similar or dissimilar using Tiny ImageNet
- Utilized **PyTorch** with hyperparameter tuning to optimize learning rates, batch sizes, and weight decay
- Achieved **94% accuracy** with MatchNet and **89% accuracy** with BEiT
- Implemented cosine similarity scoring and visual inspection to evaluate pairwise image similarities

SMTPOP (SMTP/POP3 Over TCP) | *Python, TCP Sockets, DNS, Email Protocols* Spring 2025

- Designed a custom **SMTP/POP3 email system over raw TCP sockets** with DNS server discovery and authentication
- Simulated real-world email delivery using a hybrid server-client architecture supporting multi-domain communication
- **Developed a DNS server for SMTP discovery**, enhancing system scalability and flexibility
- Implemented user authentication to ensure secure and reliable message transmission

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, HTML/CSS, SQL (PostgreSQL), C#, Java

Frameworks & Libraries: PyTorch, NumPy, pandas, Scikit-learn, Matplotlib, Node.js, Apex (Salesforce)

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, PyCharm, IntelliJ IDEA