

CARSON GARLAND

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EDUCATION

Columbia University

Bachelor of Science in Electrical Engineering, GPA: 3.94 / 4.0

New York, New York

Expected May 2024

- Minor in Computer Science
- Ruth Katzman Scholarship Recipient - 2021/22/23/24
- Computer Networks Teaching Assistant - 2023/24

TECHNICAL SKILLS

- SQL Fluency (Spark SQL, MySQL)
- Python Fluency (pySpark)
- NoSQL Proficiency (MongoDB, Neo4J)
- AWS Proficiency (Glue, Lambda, Redshift, SageMaker)
- Java experience
- C experience
- MATLAB experience

EXPERIENCE

Systems & Networking Lab

New York, New York

Undergraduate Researcher - Profs. Katz-Bassett and Zussman

Jan 2023 - Present

- Engineered and implemented a Zoom specific data collection pipeline capturing more than 500 million packets from a mixed residential and academic network over the course of three months
- Created an identification heuristic and accompanying script for the locating of probable Zoom crashes by leveraging the the combination of UDP connection analysis and packet loss based analysis
- Currently investigating how user demographics affect overall video application usage and the breakdown between individual applications

Amazon.com

Seattle, Washington

Data Engineer Intern

May 2023 - Aug 2023

- Optimized an existing, long-running data pipeline with an imaginative redesign and Spark SQL techniques; culminated in an 11 hour, 90% reduction in weekly runtime
- Formulated novel data pipelines for 4 individual Brand Experience programs pulling from more than 30 unique sources to construct a consolidated dataset of over 50 leadership requested metrics
- Orchestrated the deprecation of a legacy Redshift cluster through the migration 5 business critical pipelines and the removal of over 50 obsolete jobs resulting in estimated savings of over \$18,000 annually

AT&T Inc.

Los Angeles, California

TDP Data Analyst Intern

Jun 2022 - Aug 2022

- Produced user-friendly, approachable python scripts in order to automate Fiber Metric Definitions for the Fiber Metrics team, saving developer time
- Ingested isolated tables from local storage through Databricks and into Snowflake using SQL and python as part of the Chief Data Office's Rapid Insight Team

Wireless & Mobile Networking Lab

New York, New York

Undergraduate Researcher - Prof. Zussman

Feb 2022 - May 2022

- Utilized both Bell Labs and Meta receiver-transmitter pairs to study the path loss effects in Outdoor-to-Indoor as well as Outdoor-to-Outdoor measurements of 28 GHz and 60 GHz frequencies
- Collected upwards of 15 million measurements to establish one of the most extensive databases of 28 GHz Outdoor-to-Indoor path loss data
- Contributor to and author on "Outdoor-to-indoor 28 GHz Wireless Measurements in Manhattan: Path Loss, Environmental Effects, and 90% Coverage," [arXiv:2205.09436] accepted for publication in IEEE/ACM Transactions on Networking