# NATHANAEL GUTIERREZ



#### **EDUCATION**



### City University of New York - Lehman College

Computer Science, B.S. (December 2021)

Major GPA: 3.975

#### **Relevant Coursework**

Data StructuresAlgorithmsMachine LearningNeural NetworksDatabase SystemsNetworksOperating SystemsCryptography

Combinatorial & Graph Algorithms Linear Programming Computer Architecture Programming Methods

#### **SKILLS**

**Programming Languages** Java, Python, SQL, JavaScript, Kotlin, C++, Bash

**Frameworks** Spring, React, Next, MPI4PY, PyTorch, scikit-learn **Databases** MySQL, PostgreSQL, MongoDB, Couchbase, IBM DB2

Other Linux, HTML, CSS, LATEX

#### **EXPERIENCE**

### **PRESERV Building Restoration Management, Inc.** — Brooklyn, NY

July 2023 - February 2024

Assistant Project Manager

- Oversaw several facets of building restoration projects in NYC, including but not limited to: materials purchasing; jobsite compliance with OSHA and DOB regulations; permit acquisitions and renewals; time and materials billing
- Coordinated communications between the on-site crew, engineers, architects, sub-contractors, and other design professionals on the project

## **Georgia Institute of Technology** — Atlanta, GA

August 2022 - May 2023

Graduate Research Assistant

- Integrated a metric to identify low-importance stable neurons into the Neuro-inspired Stability-Plasticity Architecture (NISPA) for continual learning
- Introduced a mechanism for controlled forgetting into NISPA by returning plasticity to a set of low-importance stable neurons between incremental task learning phases

## **American Express** — Phoenix, AZ

January 2022 - August 2022

Software Engineer

- Led the design and implementation of a new Authorization Manager API to facilitate corporate client access to account self-servicing portals using Java and Spring Boot
- Used data science techniques to analyze historical log data in order to determine the average number of requests per seconds received during peak loads at critical endpoints with Python
- Developed a suite of tests to flag suspected spam, duplicate, or otherwise forbidden accounts existing on the database

Institute for Advanced Computational Science — Stony Brook University, NY

June 2021 - November 2021

- Undergraduate Research Assistant
  - Explored how initial conditions affect the amount of radioactive nickel produced during simulations of thermonuclear supernovae undergoing subsonic burning
  - Achieved a 13X speedup on our analysis scripts by implementing a file distribution algorithm to analyze terabytes of simulation data in parallel across multiple cores
  - Successfully ran simulations, tests, and analyses on an experimental A64FX (ARM-based) supercomputer

## **Andrews University** — Berrien Springs, MI

August 2016 - Ongoing

Freelance Software Developer

• Developed a full stack application to manage lab inventory, create work orders for maintenance, assist with lab setups and takedown, and generate custom reports