# ANDREW PANOS

Availability: January 2025

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# Education

# Northeastern University – Khoury College of Computer Sciences

Bachelor of Science in Computer Science

- Achievements & Accolades: GPA 3.92/4.00, Dean's List Scholar
- Relevant Coursework: Algorithms & Data Structures, Object-Oriented Design, Software Engineering, Artificial Intelligence, Foundations of Data Science, Database Design, Theory of Computation, Computer Systems, Programming in C++, Programming Languages, Network Fundamentals

# **Technical Skills**

Languages: Python, Java, TypeScript / JavaScript, C++, C, SQL, R Frameworks: React, Node.js, Express.js, pandas, scikit-learn, NumPy Testing & Tools: Git, Unix CLI, GCP, AWS, Docker, JUnit, Cypress, Jest

# **Relevant Experience**

## McDonald's

Software Development Engineer Intern

- Overhauled end-to-end testing suite for thousands of point-of-sale terminals by integrating Cypress Cloud Test Replay, providing video recordings of test failures to accelerate bug resolution time
- Diagnosed and resolved MongoDB and Node.js service issues within the testing environment by configuring AWS EC2 boot scripts and reimaging Docker containers, eliminating CI/CD pipeline failures
- Launched 30+ EC2 virtual lab instances to identify and troubleshoot Cypress test failures

#### Verizon

5G Engineering Co-Op

- Engineered an automated project tracking platform for the System Performance (SP) team, monitoring 700+ cell sites and enabling comprehensive tracking of all movements within yearly forecasts
- Calculated deviations between initial and current project forecasts and integrated Tableau to visualize real-time insights into progress and forecast accuracy, optimizing project management processes
- Designed a scalable ETL workflow using SQL and pandas to process tens of thousands of rows from Google Cloud Platform, generating daily status reports for SP engineers

## Northeastern University

Teaching Assistant for Fundamentals of Computer Science 1

- Supported professors and engaged with 600+ students through office hours, grading, and lab sessions
- Introduced students, many with no prior programming experience, to the foundational principles of programming

## Projects

# **EV Route Planner** | *Python, networkx, Google Maps API, NREL API*

- Created an A\*-based route-planning algorithm for electric vehicles, formulating a custom heuristic factoring in battery range, charging station distance, and minimizing detours to ensure efficient route selection
- Integrated a networkx directed graph with real-time Google Maps and NREL API data to visualize routes based on vehicle specifications and charging thresholds

# **BetterSheet** | *TypeScript*, *React*, *Node.js*, *Jest*

- Built a dynamic spreadsheet application, complete with cell references, formulas, multi-sheet management, CSV/Excel import/export, and undo/redo capabilities
- Applied the observer design pattern to manage cell dependencies and updates, preventing circular references, and developed an expression parser using the state design pattern for handling complex formulas
- Implemented Agile best practices using GitHub for version control and integrating a CI/CD pipeline to streamline development, achieving over 90% test coverage with Jest for synchronous and asynchronous testing

# Image Processor | Java, Swing, JUnit, Javadoc

- Collaborated with a partner using Git and pair-programming techniques to design and develop an image manipulation tool, utilizing the Model-View-Controller architectural pattern and command design pattern
- Delivered a tool that supports loading/saving images via a Swing GUI, text-based scripts, and command-line arguments, with editing operations including color channel adjustments, filtering, transformations, and visual effects

#### Interests

Boston, MA

# Sep 2021 – Dec 2024 Boston, MA

Nov 2023 - Dec 2023

Oct 2023 - Dec 2023

Nov 2022 - Dec 2022

Sep 2023 – Dec 2023

# Jun 2024 – Aug 2024

Jan 2024 – Jun 2024

Rolling Meadows, IL

Chicago, IL