Joseph A. Dattilo

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EDUCATION

University of Pennsylvania, School of Engineering & Applied Science – Philadelphia, PA   **August 2022 – May 2026**

Bachelor of Science in Computer Science | Cumulative GPA: 3.61/4.00

Relevant Coursework: Algorithms and Data Structures, Discrete Mathematics, Programming Language and Techniques, Automata/Computability/Complexity, Multivariable Calculus, Linear Algebra/Differential Equations, Probability, Computer Architecture, Algorithms, Computer Graphics, Databases

TECHNICAL SKILLS

Languages: Java (3+ yrs experience), Javascript/HTML/CSS (3+ yrs experience), Python (2+ yrs experience), SQL (2+ years experience), Typescript (1+ yrs experience) OCaml (proficient), C (Proficient), C++ (Proficient)

Frameworks: React (3+ yrs experience), Django REST (2+ yrs experience), Flask (2+ yrs experience), React Native (proficient), NodeJs (proficient), Bootstrap (proficient), Tailwind (proficient)

Tools: Git (3+ yrs experience), Databases (2+ yrs experience w/ Sqlite3, PostgreSQL, MongoDB, Firebase/Firestore, Azure CosmoDB), Linux/Unix (2+ yrs experience), Microsoft Azure (proficient), Pandas(proficient)

PROFESSIONAL EXPERIENCE

Karpool | Lead Developer | Cape Town, South Africa   **September 2023 – Present**
- Refactoring the application to reduce the size of the codebase by an estimated 60% increasing maintainability by 90%
- Implementing payment integration, app flow, and real-time location tracking to a 5ft radius
- Aiming to achieve funding and reach a 3000+ user base by 2024 (React Native, Microsoft Azure, Mongodb)

Karpool | Software Engineering Intern | Cape Town, South Africa   **July 2023 – August 2023**
- Built the foundation of a ride sharing application being developed for commercial use in South Africa
- Worked closely with a Figma to integrate the frontend graphics and integrated Azure as the backend and database
- Worked with a team of 6 developers and achieved a 50% completion of the MVP in a month (React Native, Microsoft Azure, Mongodb)

PennApps | Backend Engineer | Philadelphia, PA   **February 2023 – Present**
- Developed Django REST API for an application portal receiving 700+ applications and 2000+ visits a year
- Implemented 10+ endpoints to handle registration/login, email validation, saving application data, and status updates
- Developed Slack application to manage the hackathon Slack of 500+ users (Flask, AWS Suite, Django REST, React, Slack)

PROJECTS

Game Platform | Developer | Nashville, TN   **December 2022 – January 2023**
- Created a flask web app in which users can create and run games of assassin (a variant of tag)
- Reduced the time to organize a game by hand by 90%
- Implemented authentication, invite system, user permissions, game functionality, and a minimalistic UI (Flask, Jinja2, Sqlite3)

Predicting NASDAQ Closing Cross Price Movements | Developer | University of Pennsylvania   **October 2023 – December 2023**
- Analyzed financial time series data, and implemented 20 engineered technical indicators for a machine learning model.
- Utilized TensorFlow and Keras to design and implement an LSTM neural network to predict forward price movements.
- Applied hyperparameter tuning to optimize the model, achieving a 5.5 lowest mean absolute error. (Jupyter, TensorFlow, Keras, Pandas)

LEADERSHIP EXPERIENCE

Cellophony | Lead Organizer | Nashville, TN   **August 2021 – March 2022**
- Orchestrated a student-run music concert, generating over $15,000 in proceeds for free music education
- Sourced sponsors to contribute up to $700 in proceeds in exchange for advertising