James J. Cao

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OBJECTIVE
- Career in software engineering/development, business technology, data analytics (AI/ML)
- Interests in product and process design, software engineering, business decision-making automation

EDUCATION
Worcester Polytechnic Institute (WPI), Worcester, MA, 05/2024
Bachelor of Science in Computer Science, GPA 3.8/4.0, Presidential Scholarship, Dean's List

SKILLS
- Computer Science: object-oriented programming/design, software engineering (using React, Amazon Web Services-AWS, Google, Azure), algorithms and AI, database admin (RDBMS), big data management (Hadoop, Pig, Spark), containerization (Docker), systems thinking, mobile app development (Android Studio, Xcode), Linux shell, various operating systems
- Coding: Java, C/C++, Python, SQL, JavaScript, HTML, CSS, Swift/SwiftUI, Kotlin, MATLAB, R, Assembly, RobotC

PROJECTS
Major Qualifying Project (MQP) | Worcester, MA | 08/2023 – 03/2024
- Worked in a team of 3 to create an augmented reality (AR) game in Unity, using functional near-infrared spectroscopy (fNIRS) to detect the player's focus state and offer relevant choices
- Researched on whether choices dependent on focus state have enhanced the user's experience

Stock Forecaster Web Application | Worcester, MA | 11/2023 – 12/2023
- Worked in a team of 4 to create a web app which graphs future prices for a given stock based on previous stock values using a "long short-term memory (LSTM)" ML model
- Utilized various Python libraries such as Python Dash (UI) and Keras (LSTM ML model)

Interactive Qualifying Project (IQP) | Turn Back Time Farm, Paxton, MA | 03/2023 – 05/2023
- Worked in a team of 3 using an iterative design process to implement an interactive information-sharing system, benefiting the local nature-based pre-school program at the farm
- Delivered a QR code system so users can see 7 learning stations info via Google pages real-time

Crowdfunding Platform | Worcester, MA | 11/2022 – 12/2022
- Worked in a team of 4 to create a proof of concept crowdfunding platform that allowed one type of user (members) to fund the projects of another type of user (designers)
- Utilized React (frontend design), AWS (backend lambda functions), and MySQL (user info storage)

EXPERIENCE
Software Intern | **Ailares** | Princeton, NJ | 05/2023 – 07/2023
Ailares is a FinTech start-up focused on ML/AI algorithm trading systems (equity, crypto currency)
- Developed a data flow (ETL: extract, transform, load) for commercial loans and customers using CSI NuPoint, Microsoft SQL Server Management Studio (SSMS), SQL Server Integration Services (SSIS)
- Created Power BI dashboards (data visualization) organized by 7 commercial loan portfolios

Software Intern | **Ailares** | Princeton, NJ | 05/2022 – 08/2022
- Designed an extensive finance reporting dashboard with Microsoft Power BI and DAX functions (graphs, charts, data models), and supported real-time algorithm-based stock trading
- Established a new product (web application) using WordPress with a membership system and one-time purchases for online content, to analyze financial market show hosts and their stock predictions

Software Intern | **NPG Solutions** | New Albany, OH | 06/2021 – 08/2021
NPG is an IT service provider on Cloud, Collocation, Network Security, and Invoice Management
- Improved invoice file processing workflows, researched current invoice management software solution vendors and automation enabled by Optical Character Recognition (OCR)
- Produced an automated workflow on AWS (Amazon Web Service) from data received via email to data tables in Amazon DynamoDB NoSQL (Not-Only-SQL) database