Min Sung (Milo) Park

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Education

Boston University **Expected Graduation, May 2025**

Bachelor of Arts in Computer Science, Minor in Mathematics & Visual Arts *GPA: 3.5*

- **Relevant Coursework:** Object Oriented Programming, Combinatoric Structures, Geometric Algorithms, Multivariate Calculus, Linear Algebra, Differential Equations, Data Structures and Algorithms, Computer Systems, Probability in Computing, Programming Languages, Algorithms, Software Development, Database Systems, Distributed Systems

Experience

Boston Medical Center **June 2024 - July 2024**

Software Engineer Intern *Boston, Massachusetts*

- Developed a high-performance GUI for the RESPOND simulation model, forecasting opioid use disorder trends, using Figma and React; increased user engagement time by 35% through iterative A/B testing and user feedback integration.
- Automated data normalization for the model using Python and SQL, reducing manual prep time and enhancing data accuracy by 20% through min-max scaling and outlier detection, processing over 10,000 data entries monthly.
- Applied Markov Chain Monte Carlo methods for RESPOND calibration, optimizing parameter estimation and improving prediction precision by 15%, resulting in a 20% reduction in model error rates.

Spark! Technology Innovation Fellowship **Jan 2024 - May 2024**

Technical Product Manager, Lead Developer, Product Designer *Boston, Massachusetts*

- Spearheaded the development of an educational app featuring an AI-powered 3D avatar, revolutionizing children's learning experiences through engaging real-time conversation and immersive dynamic animations.
- Managed an Agile team of 3 engineers and 1 UX designer as Scrum Master, optimizing sprint cycles through task tickets and tracking with Jira while facilitating Agile development with sprint planning, daily stand-ups, and retrospectives.
- Rigged and animated an interactive avatar in Blender, programmed in TypeScript to dynamically respond to the real-time conversation with the user to make the educational experience for children more engaging.

CIDAR Lab **May 2023 - August 2023**

Software Engineer Intern *Boston, Massachusetts*

- Programmed a bioinformatics tool for Monolayer-uF Chip Networks, utilizing Depth-First Search to uncover intricate microbial community relationships and Breadth-First Search for efficient layer-by-layer pattern analysis.
- Implemented the Subset Sum Problem algorithm to analyze microbial community attributes, enhancing data analysis precision by 70% by identifying optimal combinations of community traits.
- Set robust unit tests with React Testing Library and Jest, ensuring high reliability and accuracy of components and logic, reducing post-deployment bugs.

Projects

ALEA: Esports Betting Platform with Unique Network NFTs

Solidity, Hardhat, Polkadot, Unique Network, Moonbeam, Node, Express, Apollo Server, Mongoose, React

- Engineered an esports betting platform on the Polkadot blockchain utilizing Unique Network NFTs, enabling users to place bets on esports events, receive NFTs as rewards, and trade these NFTs as collectible assets.
- Architected and deployed robust smart contracts with Solidity and Hardhat, implementing secure betting mechanisms, NFT minting functions, and integrated these contracts with Moonbeam for scalability and performance.
- Built a full-stack application with a Node.js backend, Apollo Server, and a React frontend, leveraging Polkadot for blockchain interactions and Docker for local development, ensuring a consistent development environment.

Trading Strategy Playground

Python, NumPy, Pandas, Matplotlib, yfinance, statsmodels, scikit-learn, TensorFlow, Jupyter Notebooks

- Implemented algorithmic trading strategies using historical stock data: Dual Class Arbitrage, Bollinger Band Strategy, Reinforcement Learning Algorithm, and Sector-Based Pairs Trading.
- Utilized NumPy, Pandas, Matplotlib, yfinance, statsmodels, and scikit-learn for data manipulation, analysis, visualization, and statistical analysis.
- Conducted backtesting and analysis to evaluate the potential profitability and risk management of each strategy.

Skills

Languages: English and Korean (Fluent), Mandarin Chinese and Bahasa Indonesian (Limited Working Proficiency)
Technical: Java, Python, Javascript, HTML/CSS, Mongoose, SQL, React, TypeScript, React Native, Node, Express, C, C++
Developer Tools: VS Code, IntelliJ, Git, Jira, Figma, Microsoft Office, Premiere Pro, Illustrater, Photoshop, Blender