

KIERAN SERRA

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kserra@umass.edu www.linkedin.com/in/kieran-serra https://github.com/kserra1 Portfolio Website

EDUCATION

Bachelor of Computer Science, University of Massachusetts Amherst - GPA: 3.56 Expected May 2026

Relevant Coursework: Artificial Intelligence, Web Programming, Introduction to Algorithms, Computer Systems Principles, Data Structures and Algorithms, OOP, Linear Algebra, Reasoning Under Uncertainty, Statistics, Discrete Math, Programming Methodologies, Intro to Data Analysis

SKILLS

Programming Languages: Python, Java, C, TypeScript, JavaScript, R

Technologies: React.js, Next.js, Django, PostgreSQL, MongoDB, Linux, LangChain, Flask, Git, AWS, Vercel, Jupyter, Microsoft Excel, Microsoft Word

PROJECTS

Full Stack Personal Finance Application - React.js, Next.js, Django, MongoDB, AWS

- Developed a responsive UI with React.js and a secure backend with Django, incorporating a REST API for authentication and seamless frontend-backend communication.
- Utilized MongoDB for flexible database management, enabling efficient storage and retrieval of user account information and transaction history.
- Deployed the application on AWS EC2 Instance (Ubuntu) for scalability.
- Implemented financial features: balance tracking, multiple accounts, transfers, deposits.

Full Stack Smart Quiz Application - React.js, Next.js, PostgreSQL, LangChain, Tailwind CSS

- Engineered software to transform uploaded PDF documents into quizzes using OpenAI API for quiz generation and LangChain for parsing structured JSON.
- Integrated PostgreSQL for robust and scalable database management, essential for storing user data, quiz results, and generated quiz questions.
- Implemented Google OAuth for secure user authentication, ensuring user data protection and seamless login experience.

Apple Stock Price Forecasting Model - Python, TensorFlow, pandas, NumPy, scikit-learn, Matplotlib

- Developed LSTM model to predict Apple's stock prices from 2012 to 2019, **achieving Mean Absolute Error 4.73, Root Mean Squared Error 4.73, and 93.24% accuracy.**
- Employed TensorFlow for model construction and training, NumPy for numerical operations and array manipulations, and pandas for preprocessing data.
- Visualized and analyzed training, validation, and predicted prices using Matplotlib.

EXPERIENCE

Software Engineer Intern

Jun 2024 - Present

Scholarship Auditions

Remote

- Collaborate with team members to develop messaging system, leveraging Agile methodology for iterative development and continuous improvement.
- Utilize GitHub Actions for CI/CD to automate the testing, integration, and deployment processes.

Tech Assistant

Mar 2020 - Oct 2020

Billy Keenan

Stony Point, NY

- Created visually captivating and engaging videos, utilizing editing techniques and software tools.
- Demonstrated exceptional attention to detail while providing comprehensive technical support, assisting a quadriplegic individual in overcoming barriers to accessing and navigating computer tasks effectively.
- Increased Facebook engagement by over **50%** by crafting high-quality content.