KIERAN SERRA

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EDUCATION

Bachelor of Computer Science, University of Massachusetts Amherst - GPA: 3.56   Expected 2026
Relevant Coursework: Artificial Intelligence, Web Programming, Introduction to Algorithms, Computer Systems Principles, DS&A, OOP, Linear Algebra, Reasoning Under Uncertainty, Statistics, Discrete Math, Programming Methodologies, Intro to Data Analysis

SKILLS

Programming Languages: Python, Java, C, Typescript, R
Technologies: React.js, Next.js, PostgreSQL, Linux, LangChain, Tailwind CSS, Flask, Git, Vercel, Django

PROJECTS

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

- Engineered a comprehensive quiz application that transforms uploaded PDF documents into quizzes using the OpenAI API and LangChain for advanced NLP.
- Integrated PostgreSQL for robust and scalable database management.
- Implemented a clean UI using React.js and Next.js enhancing user experience with responsive design presented by Tailwind CSS.

University Weather Aggregation System - `Javascript, Node.js, Git`

- Directed a team of three to develop a sophisticated weather aggregation system, combining individual contributions for seamless integration, **improving data accuracy by 40%**.
- Spearheaded the creation of an extensive suite of Jest mock tests, ensuring robustness and reliability in API interactions and data retrieval with a **100% test coverage**.
- Analyzed and processed university-specific weather data to produce accurate statistical results.

Website Portfolio Project - `React.js, Next.js, Tailwind CSS, Vercel`

- Developed an interactive personal website portfolio using React.js, Next.js, and Tailwind CSS for front-end development.
- Leveraged React's features to implement dynamic components, incorporating animations to enhance user engagement, resulting in an average session duration **increase of 25%.**
- Deployed using Vercel for hosting and scalability.

Information Retrieval Project - `Java`

- Implemented an Information Retrieval system in Java incorporating TF-IDF methodology and features such as relevance ranking and document indexing.
- Designed and developed a robust search engine that enables querying based on specific terms and relevance lookup.
- Successfully delivered a functional system that enhances data retrieval efficiency and accuracy.

EXPERIENCE

Tech Assistant   Mar 2020 - Oct 2020
Billy Keenan   *Stony Point, NY*

- Created visually captivating and engaging videos, utilizing editing techniques and software tools to produce high-quality content.
- Demonstrated exceptional attention to detail while providing comprehensive technical support, assisting a quadriplegic individual in overcoming barriers to accessing and navigating computer tasks effectively.
- Engineered a surge in the Facebook page's online presence through captivating content **increasing engagement by over 50%.**