Meirzhan Saparov

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Education

Stetson University Expected May 2027
B.S in Computer Science *GPA: 3.95*

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming (OOP), Discrete Structures, Software Development Life Cycle (SDLC), Database Systems, Intro to Computer Architecture, Artificial Intelligence, C++ Program Design

Skills & Certifications

Languages: JavaScript, TypeScript, Python, Java, C++, SQL (Postgres), HTML, CSS
Frameworks: React, NextJS, Node.js, Express.js, Material-UI, Tailwind CSS, Shadcn
Developer Tools: Git, Docker, AWS, Firebase, NoSQL (MongoDB), Figma, Pinecone
Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, Keras, TensorFlow
Certifications: DeepLearning.AI Supervised Machine Learning: Regression and Classification

Experience

Software Engineering Fellow August 2024 – Present
Headstarter *Remote*

- Led a team of 4+ engineering fellows to design, develop, and deploy 6 projects using MVC design patterns
- Improved data retrieval speed by 15% by integrating Pinecone vector database for semantic search, resulting in faster and more relevant user queries, which enhanced overall platform performance and user experience
- Collaborated with engineers from Amazon, Bloomberg, and Capital One to implement Agile methodologies, CI/CD pipelines, Git, and microservice architectures

Projects

SmartRate | *TypeScript, NextJS, React, Python, Prisma, PostgreSQL, Tailwind CSS, Clerk* GitHub | Live

- Developed a full-stack Stetson professors rating assistant using NextJS, PostgreSQL, OpenAI API and Llama 3.1
- Optimized PosetgreSQL database queries and implemented pagination, achieving a 40% reduction in page load times, resulting in significantly enhanced user experience and increased user engagement across the platform
- Integrated Pinecone vector database and OpenAI embeddings to create a Retrieval-Augmented Generation system (RAG), enhancing professor search accuracy by 40%
- Implemented a RESTful API using NextJS API routes, enabling seamless data flow between the frontend and backend, improving application performance
- Created a web scraper utilizing Python libraries like BeautifulSoup and Selenium, to automate the extraction of 550+ Stetson professor profiles and 2000+ student reviews from Rate My Professors

FlashAI | *TypeScript, NextJS, React, Stripe API, Firebase, Clerk, Material-UI* GitHub | Live

- Engineered a full-stack flashcard application powered by Generative AI using NextJS and TypeScript
- Integrated Stripe for seamless payment processing and Clerk for secure authentication
- Incorporated Firebase for real-time data storage and retrieval, enabling seamless synchronization of user-generated content across devices and reducing data latency by 50%
- Developed a PDF flashcard generation feature by integrating Mixtral, resulting in automated flashcard generation from uploaded PDF files
- Designed a responsive, minimalistic User Interface (UI) using Material-UI and Framer Motion, improving user experience and accessibility across devices

PantryAI | *JavaScript, NextJS, React, Firebase, Material-UI* GitHub | Live

- Developed a full-stack Pantry Management application using Next.js, React, and Firebase
- Implemented image recognition functionality using OpenAI's GPT-4 Vision API, enabling users to add items to their pantry by simply taking a photo
- Integrated Llama 3.1 to generate personalized recipe suggestions based on available pantry items