Pearl Hulbert

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https://github.com/theperljams

EXPERIENCE

EasySpeak AAC   Sep 2023-Dec 2024
Founder/CEO   Provo, UT
- Developed a React front end with a Node.js (TypeScript) backend, integrating Supabase as a vector database for Retrieval-Augmented Generation (RAG) to generate personalized user responses.
- Implemented speech-to-text transcription for real-time context extraction, enabling seamless face-to-face communication for nonverbal individuals.
- Built automation scripts to process and analyze user text messages, emails, and other files for improved personalization.
- Recruited and led a team of 2 engineers, a UX designer, and a product manager, prioritizing development efforts based on user interviews and feedback.

Amazon Web Services   June 2023-August 2023
Cloud Support Associate Intern   Dallas, TX
- Took training courses in networking, Linux, software architecture, and AWS services.
- Presented technical solutions in teams to peers and mentors, improving teamwork and public speaking.
- Troubleshot and resolved simulated customer issues, honing problem-solving and support skills.

PROJECTS

Derek: AI SRE (Hackathon Project)
- Built a back end that monitored Glue (slack competitor) channels via a graphQL API for issue reports and automated responses to resolve application problems involving AWS S3 or Wasabi object storage.
- Integrated an ML model to predict and manage object migrations, optimizing cost-performance trade-offs between storage tiers.
- Automated issue resolution by reversing migrations when necessary and using langchain + openAI to write notifying developers with detailed updates on actions taken.

Superhuman for Influencers (Hackathon Project)
- Built a React UI to centralize messages from multiple social media platforms and display AI-generated personalized responses.
- Developed a Python client using Selenium to poll Instagram DMs, relay messages to a WebSocket-enabled EasySpeak backend, and send responses back to Instagram.
- Designed system flow: Instagram DMs → backend → front end (user selection) → backend → client → Instagram.

EasySpeak Back End (Previous Python Version)
- Built a Python-based FastAPI server to support generative AI and real-time speech processing.
- Leveraged LangChain with Chroma and OpenAI to generate personalized responses based on user-provided survey data.
- Implemented multi-threaded audio transcription pipelines using Python's SpeechRecognition and Whisper, enabling real-time processing and communication via WebSocket protocols.

EDUCATION

Brigham Young University   Apr 2024
Bachelor of Science: Computer Science   Provo, UT
- Classes: Linear Algebra, Data Structures, Calculus, Algorithms, Systems Programming, Web Programming, Software Architecture, Computer Security

SKILLS

- Programming languages: C/C++, Java, Python, JavaScript, TypeScript, React
- Other relevant skills: HTML, CSS, SQL, Langchain, AWS EC2, DynamoDB, Lambda,
- Certifications: AWS Certified Cloud Practitioner, AWS Solutions Architect Associate