BENJAMIN HORN

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Highly motivated Full Stack software engineer with a Master of Science with a diverse experience set including SQL, Python, HTML, and JavaScript.

EXPERIENCE

Software Engineering Intern   Summer 2023
Veritext   Livingston, NJ

Veritext is a premier national court recording agency. Their services are relied upon by sophisticated clients, including corporations, law firms, independent contractors, and government entities.

Assignment: Create a searchable database to store information related to each case. Using Artificial Intelligence, automate the collection and summarization of data from deposition transcripts.

Accomplishments:

- Designed the schema for an SQL database which stores information from the deposition cases and allows the user to easily search for specific data and exchanges between individuals involved in the trial. The database interacts with the company's proprietary software, allowing it to more easily track previous edits, catch errors made by the text-to-speech program, and point out potential future occurrences.
- Wrote software to search for and filter questions, answers, interruptions, objections, evidence, asides, and colloquy from deposition transcripts. Each of these are then exported into separate JSON files and are subsequently used to populate the database. Previously, the company struggled to even quickly identify the chronological order of multiple transcripts for a single case. My code informs the team exactly which deposition a passage comes from and the exact timestamp for when it was said.
- Trained A.I. LLMs to analyze deposition transcripts and shorten and summarize exchanges between lawyers and deponents. This made it much easier for the lawyers to sort and locate subject-related passages.
- Analyzed available LLMs to determine which ones offered my users accurate data interpretation with low likelihood of hallucination. In a legal setting, it is especially important that a computer-generated summarization is wholly accurate and reliable.

PROJECTS

Online Retailer Database (SQL, Java, JavaScript, HTML, CSS)   January 2020-May 2020
University of Rochester, Hajim School of Engineering   Rochester, NY

- Database to store the wares of a fictional online retailer of figurines based on characters from popular culture.
- Used a web-based client to search, add, and remove from the database, and to filter between different genres and series (example: Science Fiction characters, Star Wars characters, etc.)
- Developed a web-based editor for changing employee data for a fictional company. Could add/remove employees, edit their jobs, pay, location of origin, department, manager, etc.

Employee Management Database (HTML, CSS, C, SQL)   January 2023-May 2023
University of Rochester, Hajim School of Engineering   Rochester, NY

- Team developed a web-based editor for changing employee data for a fictional company. Could add/remove employees, edit their jobs, pay, location of origin, department, manager, etc. Between the four major sections of the project, I was fairly entrenched in three of them, including the debugging for two.

Pokémon Database and Website (Database Systems, JavaScript, SQL, Python, AWS)   January 2024 - Present
Independent Project

- Stores hundreds of competitive Pokémon teams, letting users query their win/loss ratio, Pokémon included on them, the team's creator, and more.
- Developed my own website, which contains a detailed history of the origin of the teams and their creators. Hosted through AWS.
- Using MySQL, wrote a normalized database schema as well as stored procedures to better handle queries.
- Future functionality: users can submit more historical competitive teams, and submissions will be reviewed and added to the database if they can be verified.

Medical Device Product Pitching: January 2023 – May 2023
University of Rochester, Simon Business School and Hajim School of Engineering   Rochester NY
- Across two different groups, performed product conceptualization, researched marketability, cost analysis, customer discovery, sketching technical design, developed gantt charts, and crafted an investor pitch for a series of hypothetical medical devices, including:
    - A highly sensitive device which can detect cannabinoid metabolites in young pediatric patients exposed to secondhand smoke.
    - a small device which is placed over a blood-vessel aneurysm during the operation to prevent and contain ruptures from taking place.

EDUCATION

UNIVERSITY OF ROCHESTER   Degree Conferred 12/2023

Master of Science, Technical Entrepreneurship and Management: Computer Science track
Simon School of Business and Hajim School of Engineering

UNIVERSITY OF ROCHESTER   Degree Conferred 12/2023

Bachelor of Arts, Computer Science, minor in Digital Media
Hajim School of Engineering and Applied Sciences

HIGHLIGHTS – GRADUATE DEGREE

Programming Language Design and Implementation, Database Systems, Product Development and Technical Management, General Management of New Ventures, Project Management Economics Marketing and Strategy, Accounting and Finance for Entrepreneurs, Artificial Intelligence, Machine Reasoning.

HIGHLIGHTS – UNDERGRADUATE DEGREE

Data Management Systems, Computation & Formal Systems, Computer Organization, Data Structures & Algorithms, Collaborative Programming & Software Design, Intro to Web Development, Mobile App Development, Human-Computer Interaction, Copy Editing, Digital Media, Audio Production, Podcasting.

KEY SKILLS and FUNCTIONAL TRAINING

Java	HTML	Artificial Intelligence
Python	CSS	LLM evaluation and incorporation
C	PHP	Linux
C++	Relational Databases	Full-Stack Web Development
MySQL	MongoDB	Data Structures & Algorithms
JavaScript	Object-Oriented Programming	AWS

AWARDS AND ORGANIZATIONS

- Dean's List
- Graduate Student Association
- Board Game Club
- Cinema Club
- Smash Club