BRYCE RICHARDS

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EDUCATION

University of Tennessee, Knoxville   **April 2021 - May 2025**
Bachelor's, Computer Science Major, Data Science Minor   *GPA: 3.73*

SKILLS

General Programming Languages: C/C++, C#, Python, Java, TypeScript, JavaScript, HTML/CSS, MySQL
Web Development: HTML, CSS, TypeScript, JavaScript, React.js, Express.js, Node.js, AWS, SEO, REST APIs
Data: Python, SQL, Pandas, Excel, Jupyter, Postgres
General Skills: Linux, AWS, Agile Development, Git, Blender, Docker, Figma, Grafana, Adobe Photoshop

PROFESSIONAL EXPERIENCE

SwipeSum   **St. Louis, MO, USA**
Software Developer Intern   *May 2024 - July 2024*
- Spearheaded development of a web application that automates responses to customer support emails by leveraging Google's AI to generate accurate replies using tens of thousands of past internal support emails as a reference.
- Designed and implemented a PostgreSQL vector database with advanced filtering (e.g., keyword search, category tags, AI modes), improving query speed and response accuracy.
- Engineered backend data workflows in Python, applying natural language processing techniques to preprocess and vectorize past email data for intelligent retrieval and contextual AI responses.
- Collaborated directly with the support team in a fast-paced startup environment to refine product features and UX.
- Automated regulatory and onboarding emails via Zapier and CRM integration, increasing internal workflow speed and reducing manual workload.

Disco!   **Remote**
Web Developer Intern   *February 2024 - May 2024*
- Built an event management dashboard that allowed businesses to create, update, and manage company events with real-time updates and a seamless user experience.
- Used Next.js for backend logic and API routes, React for dynamic frontend components, Directus as a headless CRM for data management, and deployed the platform through Vercel with styling handled via Tailwind CSS and Flowbite.
- Collaborated with a multi-dev team using Git, CI/CD workflows, and code review processes to ensure smooth and maintainable feature deployment.
- Integrated the Google Maps API for location validation and dynamic event mapping, and enabled image uploads with asset management via Amazon S3 for a smooth scheduling experience.

PROJECTS & OUTSIDE EXPERIENCE

fantanofy.com
Node.js backend / EJS Frontend Website
- Designed a full stack web application from scratch which uses Spotify's RESTful API to compare users' music tastes to popular music critic Anthony Fantano.
- Gathered and formatted thousands of of his reviews' data using Python, created a MySQL database for querying any matches in the user's top tracks and artists, and designed an engaging visualization page.
- Programmed the backend written with Express.js, and the frontend written in responsive HTML, EJS, CSS, and JavaScript.
- Deployed to my own self-hosted Linux server utilizing Docker containers, Nginx, data collection using Grafana/Prometheus, SSL certification, SEO optimization, and has been used by hundreds of people around the world.

CelebrityTTS
https://github.com/brycerichards13/CelebrityTTS
- Created a desktop application with an interactive GUI used for converting text to audio read out by celebrity voices.
- Trained a neural network utilizing the PyTorch Tacotron 2/Wavenet architecture using a custom dataset.
- Developed the dataset by scraping audio from the internet to create training data for the machine learning model.
- Utilized these trained models to allow users to input text and have it be read back in the voice of a chosen celebrity.
- Connects to the Streamlabs API for live streamers to have their donations read out by a chosen celebrity.