

Brandon Pieczka

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<https://bardemic.github.io/Portfolio/>

EDUCATION

IOWA STATE UNIVERSITY

Ames, IA

B.S. in Software Engineering

August 2024 - December 2027

Relevant Coursework: Object Oriented Programming, Introduction to Data Structures, Digital Logic, Linear Algebra, Problem Solving in Software Engineering, App Development, AP CSA, Digital Electronics

PROJECTS

Codegram | NEXTJS, EXPRESSJS, WEBRTC, WEBSOCKETS, SHADCN, TAILWIND

November 2024

1st At Swan Hacks

- Full-stack application that matches students with tutors, creating a one on one video call, allowing tutors to edit code students share and show the output within the page
- Incorporated WebSockets to handle real-time changes within the coding platform, as well as to ensure authentication throughout usage
- Utilized WebRTC to allow peer-to-peer video and audio streaming, requiring minimal server load
- Built a responsive frontend, allowing simple and fast navigation for users using NextJS

VoiceThief | FLASK, GOOGLE CLOUD, TWILIO, WEBSOCKETS, NGROK, HTML, TAILWIND

November 2024

3rd At Ivy Hackathon

- A security demonstration tool showcasing voice cloning vulnerabilities in social engineering attacks
- Utilized Twilio API to allow the server to call and talk to the user, storing the audio clips
- Connected with a Websocket to Google Cloud's API to transcribe the phone call as the user speaks
- Implemented voice cloning with Speechify API to communicate back to the user in the user's voice

AiShorts | NEXTJS, NODEJS, TYPESCRIPT, GOOGLE CLOUD, REVIDEO, SUPABASE, STABLE DIFFUSION, TAILWIND

July 2024 - Present

- Developed a SaaS product with a subscription model for users to create a set amount of automatically generated videos to upload to the content platform of their choice
- Built a scalable backend with Typescript and Node.js, optimized and prepared for AWS Lambda deployment to allow simple scaling and efficient computing
- Designed RESTful APIs to communicate between servers
- Incorporated several Google Cloud AI products, including Google Gemini, Text-to-Speech, and Speech-to-Text, to allow a cost effective generation process

PROFESSIONAL EXPERIENCE & LEADERSHIP

Software Development Contracting

May 2024 - July 2024

Freelancing

- Developed several projects for clients, ranging from full stack applications for an individual person to a tool used to notify groups of people of out of place bets to place using scraped information

MHTI Illinois - Non-profit

August 2023 - December 2023

Head of IT

- Helped restructure and manage the website from a template and Google Forms to a NextJS based website with custom forms built using Zod

TECHNICAL SKILLS

- **Languages:** Javascript/Typescript, Node.js, NextJS, Flask, Python, Angular, Java, C, Go, React Native, Expo, HTML/CSS, Tailwind
- **Technologies:** Git, Github, Docker, Vercel, Postman, Xcode, Linux, Coolify, AWS, Google Cloud, Chromium