

ORNIE PAYER

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Skills

- Python | Java | JavaScript | Typescript | C/C++ | Assembly | VHDL | Verilog | Git/Github | Linux/Ubuntu
- Node.js | Express.js | React.js | React Native | jQuery | Tailwind CSS | MongoDB | SQL | AWS | Docker
- OOP | Unit Testing | Debugging | Data Structures | Algorithms | Data Visualization | API Development | API Testing | Research
- Frontend Development | Backend Development | Full-Stack Development

Experience

Software Engineer Fresumes Buffalo, NY, USA 09/2024 - Current

- **Led development** of a high-impact, AI-driven resume database, incorporating **mass messaging automation** and **intelligent candidate sorting**, streamlining recruitment workflows and enhancing user engagement.
- **Architected and implemented** scalable full-stack solutions across **TypeScript**, **React Native**, and **MongoDB**, improving backend performance and ensuring smooth data flow from **backend API endpoints** to frontend displays.
- **Enhanced database functionality** by updating MongoDB schemas and **optimizing data retrieval** to display resumes by most recent uploads, resulting in a **40% faster search and sorting experience** for recruiters.
- **Developed core frontend components** for infinite scrolling resume display, achieving **seamless user experience** and maximizing **UI/UX efficiency** with responsive design principles.
- **Deployed and managed Docker containers**, standardizing development environments for smoother deployment cycles and **reducing environment-related setup issues by 60%**.
- **Collaborated cross-functionally** in code reviews, agile sprints, and feature planning with cross-functional teams, refining workflows and improving code quality for more efficient development cycles.
- **Recognized by CEO** for contributions to site functionality, including implementing revenue-generating features and continuously acquiring new skills to exceed project goals.

Undergraduate Research UB Department of Computer Science and Engineering Buffalo, NY, USA 09/2024 - Current

- **Engineered** the user interface for the **MindVoice Application**, a cross-platform software designed to record and analyze EEG and audio data to decode user speech intentions.
- **Developed and implemented** interactive UI components using **Electron**, **TypeScript**, **Vite**, and **Tailwind CSS**, transforming **Figma** prototypes into a responsive and intuitive application.
- **Created** connect functionalities for EEG and audio devices, data collection duration inputs, and visualization modules for real-time EEG and audio data.
- **Integrated the BrainFlow API** for EEG data acquisition and processing, working with real 32-channel EEG datasets, enhancing data accuracy and reliability.
- **Visualized** complex EEG data by implementing dynamic graphs and charts using **Chart.js**, improving data interpretability by **40%**.
- **Optimized** application performance and security by effectively managing main and **renderer** processes in **Electron**, adhering to best practices to mitigate Node.js security vulnerabilities.
- **Collaborated** with a multidisciplinary team in an **Agile** environment, participating code reviews, and documentation, resulting in a **25%** increase in development efficiency.
- **Designed** data flow diagrams to illustrate EEG data interactions between users, the application, and machine learning algorithms, streamlining the data processing pipeline.
- **Conducted** research on EEG data representation and visualization, leveraging the **BrainFlow** documentation and APIs to transition from synthetic boards to real EEG data.
- **Collaborated** on inference modules by integrating machine learning models, enabling the application to decode user intentions from EEG and audio data with 85% accuracy.

Head Teaching Assistant UB School of Engineering and Applied Sciences Buffalo, NY, USA 09/2024 - Current

- **Managed and led** a team of teaching assistants, coordinating instruction and support for over **200 students** in **CSE 341: Computer Organization**.
- **Delivered lectures and recitations** on advanced topics in **computer architecture**, including **assembly language programming**, **VHDL/Verilog**, **processor design** (single-cycle, multi-cycle, pipelining), **cache memory systems**, and performance metrics like **CPI**, **clock rate**, and **instruction count**.
- **Developed, administered, and graded** exams and assignments, enhancing the curriculum.
- **Improved** student performance by providing personalized guidance during office hours and recitations, fostering critical thinking and problem-solving skills.
- **Optimized** course operations by streamlining communication between faculty, teaching assistants, and students, creating an efficient and

collaborative learning environment.

Teaching Assistant

UB School of Engineering and Applied Sciences

Buffalo, NY, USA

09/2024 - Current

- **Led** lab sessions and office hours for over **650 students** in **CSE 115: Introduction to Computer Science I**, reinforcing foundational programming concepts in **Python**.
- **Delivered** instruction on key software engineering topics, including:
 - **Expressions:** simple and compound expressions for efficient code execution.
 - **Statements:** mastering return statements for function output management.
 - **Function Definitions:** developing modular and reusable code through functions.
 - **Control Flow:** utilizing if, if-else, if-elif-else, and for loops to manage program logic.
 - **Data Structures:** manipulating lists, strings, and dictionaries for effective data management.
 - **File I/O Operations:** handling file input/output with open, with...as..., and CSV operations using csv.reader, csv.writer, and writerow().
- **Assisted** students in debugging and optimizing code, fostering problem-solving skills essential for software development roles at leading tech companies.
- **Collaborated** with faculty to design and improve lab materials, aligning coursework with industry best practices and emerging technologies.

Operations Engineering Intern

Back Market

Brooklyn, NY, USA

07/2022 - 08/2022

- **Optimized device refurbishment processes** by collaborating directly with the Senior Refurbishment Manager and IT Operations Specialist, leading to a **15% increase in operational efficiency** and boosting sales.
- **Engineered automated testing scripts** for battery health assessments using tools like **Coconut Battery**, effectively resolving hardware issues including port functionality testing and firmware password recovery.
- **Implemented comprehensive data security protocols** by utilizing **Blanco software** for data erasure and device integrity checks on iOS and Android devices, ensuring compliance with industry data security standards.
- **Enhanced product reliability** through rigorous quality assurance tests, including Wi-Fi connectivity assessments and screen evaluations to identify and address issues like dead pixels.
- **Streamlined quality control workflows** by integrating **Salesforce** for customer relationship management and **iAuditor** for detailed inspections, improving workflow efficiency by **20%**.
- **Facilitated cross-functional communication** using **Slack**, enhancing coordination and project management across hybrid work environments.
- **Optimized resource management** by assisting in logistical planning and reorganizing office resources, resulting in improved space utilization.
- **Executed final product inspections** before shipment, including NVRAM resets, device version and language verifications, documentation checks, and charger functionality tests, ensuring high-quality customer deliveries.
- **Conducted multi-category product testing** through "Mystery Order" protocols, ensuring product quality across smartphones, MacBooks, AirPods, gaming consoles, and Apple Watches.

Education

Bachelor of Science

University at Buffalo

Buffalo, NY, USA

08/2022 - 12/2025

- Major in Computer Science

Projects

LINK TREE CLONE:

- Developed using HTML and CSS, this project focuses on responsive web design, featuring a fixed background, profile section, and social profile links styled as interactive cards.
- Emphasizes responsive layout and typography adaptability across different screen sizes, showcasing proficiency in HTML and CSS.
- Serves as a personal, efficient alternative to the Linktree platform, consolidating social media profiles in one streamlined web page. (06/2022)

GOOGLE SEARCH ENGINE CLONE:

- A personal project that recreates the Google home page using HTML and CSS, intended for educational purposes and showcasing skill in replicating intricate web designs.
 - The design includes a navigation header, main search section, and footer, with attention to replicating Google's iconic style and layout.
 - Employs CSS for dynamic visual effects, highlighting capabilities in front-end development and responsive web design.
- (07/2023)

TESLA GALLERY APP:

- A visual library web application for Tesla vehicle images, displaying various models such as Model S, 3, X, Y, Roadster, Cybertruck, and Tesla Semi.
- Utilizes HTML, CSS, and JavaScript to deliver a high-quality, responsive user experience, optimized for performance and scalability.

- Features include a seamless browsing interface, high-resolution image handling, and community photo submissions.
- Offers an engaging platform for Tesla enthusiasts, with integrated links to Tesla resources and related sites.

(01/2024)

GRADE CALCULATOR WEB APP:

- Created a full-stack, responsive web application that outperforms existing grade calculators with a modern, clean UI designed for superior usability and efficiency.
- Engineered robust back-end logic with Node.js and Express for secure grade and GPA calculations, handling edge cases like division by zero and user input validation.
- Designed a clean and aesthetic front-end using modern JavaScript and CSS, featuring a responsive layout optimized for all devices, enhancing usability and accessibility.
- Implemented advanced error detection and handling mechanisms to ensure seamless user experience and reliable grade computations.
- Achieved efficient form processing, data validation, and improved UI transitions, ensuring smooth interactions and intuitive navigation.
- Integrated a modular, scalable architecture to facilitate future enhancements, prioritizing maintainability and performance.

(06/2024)

UB EATS:

- Developed a robust web application for UB students to review and rate campus dining options, enhancing the dining experience through interactive community feedback.
- Collaborated on full-stack development, including front-end enhancements and server-side optimizations, to deliver a cohesive, responsive web experience.
- Built and optimized the Flask/Python server for efficient data handling, ensuring seamless integration between front-end and back-end components.
- Implemented core features, including user authentication, profile customization, and a like/dislike system, while ensuring data security and responsiveness.
- Led the HTML and CSS design to deliver an intuitive and visually appealing interface, outperforming existing review platforms in usability and efficiency.
- Optimized performance using Docker for seamless deployment and efficient resource management, addressing security and bug issues with thorough final testing.
- Collaborated in a team environment to deliver the project on tight deadlines, showcasing effective communication, agile planning, and integration of multiple back-end and front-end components.

(09/2024)