Jerrick Ban

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University of Notre Dame
Notre Dame, IN

Bachelor of Science in Computer Science
Minor: Engineering Corporate Practice
GPA: 3.91 | Dean's List: Spring 2022

Experience

Undergraduate Research| Research Assistant | Spring 2022 - Current

- Collaborated with a Ph.D student to develop and publish an Adobe Premiere Pro extension, MIMOSA, designed to separate the independent sound sources from the original soundtrack and ground them to their visual counterparts in the video by visually tracking the positions of the sound sources, providing users with a more immersive video experience
- Delivered weekly updates detailing project progression and challenges, revisions in workflow, and the formation of new weekly objectives to move the project forward at an efficient pace
- Prototyped a wireframe of the UI of the web application using Figma
- Led the development of the Adobe Premiere Pro Extension using Adobe's own toolkit, ExtendScript, as well as Javascript and HTML/CSS
- In the process of co-publishing a research paper for the Adobe Premiere Pro extension project
- Exposed to Tensorflow through the DCASE 2020 FUSS baseline model for sound separation

Hesburgh Hackathon | Spring 2022

- Collaborated and Communicated effectively with 3 other team members to publish a functioning Solar Power Consulting web application to the internet within 2 days
- Organized, Analyzed, and Extracted online data about residential solar systems using Python libraries to enable back-end development

CS For Good | REAL Services | Spring 2022

- Effectively collaborated with a small group of students to build and develop a web application for the club
- Mentored group members in HTML/CSS to encourage a more open and friendly environment

Engineering Computing| US Unemployment Project | Spring 2022

- Analyzed, cleaned, and visualized various datasets relating to US Unemployment using Python and its libraries such as pandas and plotly
- Developed a front-end web application using HTML/CSS/Bootstrap as a platform to embed our visualizations

Harvard CS50x Computer Science Online Course | Certificate of Completion | Summer 2020

- Created a program in C that can identify the type of credit card based on its number.
- Coded a program in Python that can match a DNA sequence to the person with the closest DNA.
- Simulated stock trading with the Python micro web framework Flask (python and html).
- Wrote various SQL queries for organizing, sorting, and transforming data.

Electroternity | Founder | Fall 2017 - Summer 2018

- Provides a digital trading platform for local communities and schools to reuse unwanted electronics in order to reduce electronic waste.
- Programmed the website from scratch with self-taught programming languages (HTML, CSS, bootstrap).
- Developed and managed the back-end databases using PHP

Employment

First Solar |Data Science Intern | Summer 2022

- Analyzed, automated, and visualized solar module performance data to enable faster and more reliable performance prediction and analytics.
- Transcribed JMP plots for field and laboratory data to Python using packages such as Seaborn, Pandas, and Numpy, and visualized these plots using Streamlit. Achieved an 80% reduction of the average original runtime.
- Developed a program to periodically move a large number of images of solar modules within the File Explorer using Python, eliminating the need for manual operation
- Improved upon and modified the solar panel PV degradation models for various solar technologies, reducing the risk of warranty returns of the solar module products

Education

Notre Dame | Class of 2025

- Fundamentals of Computing, Discrete Mathematics, Systems Programming, Linear Algebra and Differential Equations, Data Structures, Theory of Computing, Logic Design

Skills

Code Languages:	Python, C, C#, C++, Javascript, Swift, PHP, Bash, HTML/CSS,
Computer Skills:	SQL, SSMS, MATLAB, Figma, Excel, RegEx, React.js, ExtendScript, Github, Tensorflow, Azure DevOps
Soft Skills:	Problem solver, Analytical, Teamwork Oriented, Open Minded, Eager to learn, Strong Interpersonal Skills