Derick Shi

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EDUCATION

University of Notre Dame Notre Dame, IN 46556 *May 2027*
Bachelor of Science GPA: 3.85
Majors: **Computer Science** and **ACMS** (Applied Computational Mathematics and Statistics Dean's List 2023
London Study Abroad: EE 24235 Engineering of Photography, EG 44175 Tech Ethics *May 2024 - June 2024*

- Developed a full stack medical image detection application with 89.1% accuracy utilizing deep learning models with YOLOv8 framework to classify and construct bounding boxes on data sourced from kaggle API
- Utilized a Streamlit frontend framework to construct an interactive web app displaying results with Python scripts

Course Taken/Taking: **Data Structures, Logic Design, Systems Programming, Discrete Math**

PROJECTS

PwC STEM Consulting | Student International Business Council *January 2024 - April 2024*

- Analyzed cyber insurance market trends and past claim data for an arbitrary cyber insurance company to provide strategic insights and recommendations for growth using Python, Matlab, and Pandas library.
- Delivered comprehensive insights encompassing the client's expansion strategy and risk mitigation approach in light of emerging challenges such as nation-state cyberattacks.

Riverbend Community Math Center Website *October 2023 - December 2023*

- Implemented a note frequency detector, various number games, and piano key player on their activities webpage utilizing HTML, Javascript, and CSS to improve engagement among middle school students.

Distracted Driver Recognition *August 2022*

- Developed a recognition software achieving 93% accuracy in python with machine learning algorithms and models such as CNN, and packages like Tensorflow to detect distracted drivers out of an image dataset.

WORK/RESEARCH EXPERIENCE

Campus Bike Connect Start-up Co-Founder | IDEA Center Notre Dame *March 2024 - Present*

- Launching a bike sharing solution using smart locks powered with Arduino and developing Expo frontend that interfaces with a MangoDB backend to enable remote bike lock unlocking and tracking

Retail Banking Intern | Notre Dame Federal Credit Union *July 2024 - August 2024*

- Analyzed loan data with Pandas library on Jupyter notebooks to identify market growth potential and processed 100+ financial transactions daily with CuBase software, ensuring data accuracy and compliance

Undergraduate Research Assistant | Notre Dame Computer Vision Research Lab *October 2023 - May 2024*

- Constructed custom machine learning models utilizing YOLOv5 framework to analyze and process 100+ GB video dataset in order to generate CSV files optimized for future training purposes.
- Validated and refine video output data with Label Studio, ensuring precision in object classification

Consulting Intern | Lucy Family Institute for Data & Society Civic Innovation Lab *June 2022 - July 2022*

- Researched and explored four potential solutions to reduce a $70,000 appraisal gap for Habitat for Humanity.
- Developed surveys to discern homeowner interests and compiled a detailed analysis in a white paper.
- Presented findings to the St. Joseph County Habitat Board of Directors

EXTRACURRICULARS/ACTIVITIES

Chinese Cultural Society Co-Treasurer *August 2024 - Present*

- Managing a yearly budget of over $10,000 and communicating strategic goals to a club of over 100 members

Visa Upskill Tech Pathways Attendee *June 2024 - August 2024*

- Acquired technical interview skills and gained insights into the operations of fintech companies like Visa

SIG (Susquehanna International Group) Freshman Discovery Day Attendee *February 2024*

- Attended a webinar that introduced fundamental market concepts and quantitative trading strategies

TECHNICAL SKILLS

Proficient Skills: Python, C++, Excel **Familiar Skills:** JavaScript, HTML, CSS, MySQL, Matlab, Jupyter Notebook

Framework/Libraries: Pandas, Numpy, Seaborn, Node.js, React.js, Streamlit, Django, Expo, MangoDB
PCEP – Certified Entry-Level Python Programmer certification Putnam Score: 9