

Derick Shi

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U.S. Citizen | www.linkedin.com/in/derick-shi-real | Granger, Indiana

EDUCATION

University of Notre Dame Notre Dame, IN 46556

May 2027

Bachelor of Science

GPA: 3.82

Majors: **Computer Science** and **ACMS** (Applied Computational Mathematics and Statistics)

Dean's List 2023

Minors: Engineering Corporate Practice

Relevant Courses: **Data Structures, Computer Architecture, Theory of Computing, Operating Systems, Compilers**

PROJECTS

Second Place Hesburgh Hackathon | University of Notre Dame

April 2025

- Won \$2000 by developing a full stack mentorship connection platform with React, Vite, and Back4App
- Implemented a semantic-based querying algorithm for user to mentor matching with OpenAI API

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 dashboard to construct an interactive web app displaying results with Python scripts

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, Seaborn, and Pandas.

WORK/RESEARCH EXPERIENCE

Software Development Engineer Intern | Amazon

May 2025 - August 2025

- Developed a \$10M+ daily search marketing bid data pipeline using Apache Spark and Scala, achieving a 20x faster processing time and 3x lower compute cost compared to current system.
- Built and deployed the ETL jobs as code using AWS CDK and TypeScript to manage permissions, monitor 30+ metrics in CloudWatch and identify over \$60k+ in current data quality issues using AWS Redshift.
- Deprecated a legacy Apache Pig system, eliminating ~60 high-severity incident tickets annually

Campus Bike Connect Start-up Co-Founder | IDEA Center Notre Dame

March 2024 - August 2025

- Launched a bike sharing solution using smart locks powered with Arduino and developed a mobile app on Apple/Google playstore that interfaces with a Flask and MangoDB to enable bike lock unlocking and tracking
- Accepted in the IDEA Center Pre-Accelerator (Top 10% of startups) for additional funding and business support

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 machine learning training purposes.

EXTRACURRICULARS/ACTIVITIES

Chinese Cultural Society Co-Vice President | University of Notre Dame

August 2024 - Present

- Managed a yearly budget of over \$12,000 and assisted in directing a cultural showcase for 200+ attendees
- Developed interactive website with React to manage finances and streamline club management tasks

Visa Fintech Foundations Program | San Francisco, California

October 2024 - January 2025

- Investigated implementation strategies of central bank digital currencies utilizing a blockchain network
- Introduced adoption methods for a U.S. market to Visa's Chief Strategy Officer and other directors.

TECHNICAL SKILLS

Languages/Skills: Python, C++, Java, Scala, Typescript, JavaScript, SQL, Matlab, Jupyter Notebook, Git, Pandas, REST API, Numpy, Fusion 360, Seaborn, Node.js, React.js, Express.js, Streamlit, Django, Expo, MangoDB, AWS CDK