

# Brisny Rodriguez Flores

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## EDUCATION

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### The University of Notre Dame

B.S. of Science: Computer Science

Notre Dame, IN

Expected May 2026

B.S. of Arts: Chinese, History

Research Interest:

- Computer Vision and Biometrics: Peri-Ocular Recognition and Handwriting Recognition with an emphasis in improving classifier accuracy
- Social and Cultural Applications: Leveraging natural language processing and machine learning to analyze social phenomena, including sentiment analysis related to gender and sexuality, fan culture, and the computational analysis of historical narratives and rhetoric.

## RESEARCH EXPERIENCE

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### University of Notre Dame

*University Research, Computer Science and Engineering*

Notre Dame, IN

August 2024 – Present

- Applied preprocessing methods to isolate eye regions, through the use of ‘eye hardcasscade’, ‘face hardcasscade’, and arcFace
- Leveraged pre-trained classifiers and validation mechanisms to check for data accuracy

*Research Assistant, ESURE Program*

June 2024 – July 2024

- Constructed a data scraping algorithm that would obtain over 100 social media posts under a specific category, catered to the media that it being targeted
- Gathered information needed to create meta id's of social media posts, with the goal of detecting the usage of AI

*Research Assistant, CSE Enrichment Program*

May 2023 – July 2023

- Constructed infrastructure to easily visualize collected data across different figures of merit given different technology-based solutions
- Created a customized variation of a dot plot to show the relationship between accuracy and different distance formulas, materials and architectures to be dynamically adaptable to the number and types of trials and methods, etc.

## CONFERENCE PARTICIPATION

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### Midwest Conference of Asian Affairs

September 2024

- Utilized different imaging techniques to map travel and social network of 2 government officials; Lu Buwei and Shuli Tzu
- Broke down the changes that occurred from the transition between Qin State to Qin Empire, and the impact that had on the methods people used to rise the socio-political ladder in their effort to improve their official position

### Grace Hopper Celebration

October 2022

- Awarded a virtual scholarship (sponsored by Ford)

### Grace Hopper Celebration

October 2025

## TEACHING EXPERIENCE

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### University of Notre Dame

*Teaching Assistant, Baflour-Hesburgh Scholars*

Notre Dame, IN

*Programming Teaching Assistant - Professor Kumar*

Seasonal, June 2022 - July 2024

2022, 2023

- Taught myself HTML and Javascript to an intermediate level, so that I could easily adapt to people's coding styles
- Explained code to students for different coding backgrounds by simplifying the language used or the topics discussed

*Calculus Teaching Assistant - Professor Lim*

2022, 2024

- Explained central topics found in Precalculus and Calculus 1 so that I could properly convey the information to incoming under-represented freshman
- Learned to be more specific and precise with my language when explaining new topics to people
- Facilitated group learning and attended to people one-on-one
- Managed my time so that I could attend to the greatest number of people, grade worksheets, and proctor quizzes.

## RELATED PROJECTS

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### University of Notre Dame

*Neural Networks*

January 2025 – May 2025

- Experience different forms of Neural Nets (RNN, CNN, etc.) having debugged them and seen how they worked
- Create a program to identify verb-pronoun association and sentiment in verb-pronoun association was analyzed in an attempt to have a top layer overview of the development on changing perceptions towards women

*History Workshop*

January 2025 – May 2025

- Focus on the use of written language and the implications certain rhetoric had in the narrative of court cases and newspapers
- How language used by a retelling of a court case (not the actual document) aimed to create an antagonistic image towards the defendant and what it means about their social positions and how their cultural/ethnic background was perceived
- Went through a series of newspaper articles to locate negated information, and manipulate timelines to show the writer's efforts or their inherent bias that led to a transformation of who they were interviewing into someone different .

*Digital Empires*

January 2024 – May 2024

- Learn about the Warring states period, the Qin dynasty and the very beginnings of the Han dynasty; focusing on what social characteristics lead to all three such as the social network, geographic location
- Analyzed certain parts of the *Grand Historian* 史记 to track the geographic and social mobility of certain scholars
- Used online tools like Gephi to map the social network (based on strength and type) of various civil officials

*Industry and Community Based Innovation Projects*

August 2023 – December 2023

- Helped to develop novel applications of augmented reality (AR) technology for use in engineering design and manufacturing based on Unity and the Microsoft HoloLens platform

#### *Chinese Pop Culture*

August 2023 – December 2023

- Learned about the transformation of popular culture in China due to the inner and global politics surrounding China
- Focused on the changing views on masculinity and femininity in modern China
- How globalization has influenced the ideas society have towards men, and the states own push for a certain global view in an effort to expand their brand of soft power
- Investigated how the transformation on how masculinity is perceived in China, and how the global influence from west, has pushed for increased censorship on Danmei works in previously protected spaces

## **LEADERSHIP & OUTREACH**

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### **University of Notre Dame**

Notre Dame, IN

#### *President, Animation Club of Notre Dame*

May 2024 – Present

- Founded the Animation Club of Notre Dame to connect those interested in the media as either a hobby, career path, or form of entertainment
- Aim to create workshops to facilitate the learning of animation and what it means to enter to the animation industry

#### *Board Member, Historical Review*

September 2024 – Present

- Helped plan the announcement date, cut off, and rubric
- Graded various papers to the standards of the Review along the categories of complexity and analytical thought
- Checked the validity of source by checking the authors, journals being published, etc.

#### *Intern, Office of Student Enrichment*

August 2024 – May 2025

- Helped with set up and take down of events curated for Notre Dame Students
- Creates social media posts to promote OSE events and the community found in the office

#### *Student Board Member, Office of Student Enrichment*

August 2022 – May 2023

- Gave feedback on events and provide services based on experience and personal background
- Contributed to the mission of the Office of Student Enrichment in relation to the campus community

## **PROFESSIONAL AFFILIATIONS**

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#### Women in Computer Science - Notre Dame

2023 - Present

#### Balfour Hesburgh Scholars

June 2021 - Present

#### McInerney Fellows

July 2022 - Present

## **TECHNICAL & LANGUAGE SKILLS**

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**Languages:** English (fluent), Spanish (fluent), Chinese (intermediate)

**Coding Languages:** Python, C, Java, JavaScript, HTML, Command Line,

**Software:** Blender, Maya, Microsoft Excel, Gephi