

# CARLOS BASURTO

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## EDUCATION

**University of Notre Dame** | Notre Dame, IN May 2026  
*Bachelor of Arts* | Majors: Computer Science, Philosophy | Minor: German GPA: 4.0  
Distinctions: Dean's List 2022, 2023, 2024; Mexican-American Scholar 2023, 2024, 2025; Stephen Rogers Scholar 2024, 2025

## EXPERIENCE

**The Technology & Digital Studies Program** | Notre Dame, IN May 2024 – Present  
*Generative AI Research Assistant - "Student Gen AI Expert"*

- Develop captivating and insightful **Python text analysis topographic visualization tools** as part of PhD John Behren's team of handpicked, dynamic tech interns supporting research and teaching initiatives at Notre Dame
- Lead personalized **AI-based Python web-scraping** interactive tech tools, optimizing code structures and workflows for AI-driven data processing, improving project delivery speed by **60%**

**The Observer** | Notre Dame, IN August 2022 – Present  
*Columnist*

- Articulate biweekly, succinct, argumentative articles regarding philosophy, politics and ethics, engaging over **10,000** members of the Notre Dame community
- Demonstrate clear, persuasive communication, addressing complex issues in a concise manner

**Kellogg Institute for International Studies** | Notre Dame, IN December 2022 – May 2024  
*Developing Research Fellow*

- Analyzed and processed thousands of datapoints through **Excel APIs** and **Excel scripting** regarding political polarization in Latin America from the V-DEM database for PhD Scott Mainwaring's academic publications
- Designed **Python natural language processing (NLP)** applications to register and formalize qualitative data of subnational regime change in Latin America from scholar and historical sources via literary reviews for PhD Javier Perez Sandoval

**The University of Notre Dame** | Notre Dame, IN January 2024 – May 2024  
*Calculus II Teaching Assistant*

- Lectured and provided **technical tutoring** for **Spanish-speaking** engineering students in PhD Annette Pilkington's Calculus II course, enhancing their understanding of sophisticated mathematical concepts
- Achieved a **10% exam score improvement** among students through customized instruction and targeted coaching

## LEADERSHIP & ACTIVITIES

**The Video Gaming Club of Notre Dame** | Notre Dame, IN April 2023 – Present  
*President*

- Direct a committee to manage an academic and recreational digital media club, growing membership by **300%** to over **500** members by co-founding the **Video Gaming Development and E-Sports subcommittees**
- Spearheaded fundraising efforts, acquiring over **\$30,000 in sponsorships** through the establishment of professional dialogue with the **Information Technology Center** and negotiating a partnership with **Dell** and **CDW**
- Designed and oversaw the foundation of the **ITC Gaming Lab**, dramatically boosting engagement

## RELEVANT PROJECTS

**pqsh** | Notre Dame, IN September 2024

- Built an **operating system scheduler** in **C**, integrating **multiqueue scheduling** with FIFO and Round Robin policies and replicating an **interactive shell environment** through **signal handling**
- Enabled multi-core concurrency and tracked key metrics like **turnaround time and response time**, improving OS system efficiency with **20% faster task management** through careful design of scheduling algorithms

**miles** | Notre Dame, IN April 2024

- Developed a **Python-based web crawler**, using libraries such as **concurrent**, **urllib**, and **requests** to handle web scraping, file management, and concurrency
- Engineered the project to efficiently manage **data extraction** from websites, improving data processing by **15%** through optimized threading

## SKILLS & INTERESTS

**Technical:** Python, C, C++, UNIX, shell, MATLAB, Unreal Engine 4, Unity, Adobe Cloud (Photoshop, Premiere Pro)

**Language:** English (C2 proficiency), Spanish (native), German (advanced), Bahasa Indonesian, Japanese (elementary)