# Luis Castellanos

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## Education

## Purdue University — West Lafayette

B.S. in Mathematics & B.S. in Data Science

Aug. 2021 — Dec. 2025 West Lafayette, IN

## **Relevant Coursework**

**Mathematics:** Discrete Math, Modern Algebra, Complex Analysis, Real Analysis, Intro to Fourier Analysis, Ordinary Differential Equations, Stochastic Processes

**Data Science / Computer Science:** Data Mining and Machine Learning, Linear Programming, Data Structures and Algorithms, Foundations of Computer Science, Intro to AI, Intro to Data Science, Large-scale Data Analytics, Problem Solving and object oriented programming, Data Science Capstone

Statistics: Intro to Probability Theory, Statistical Theory

## **Projects**

## Java Marketplace Program

Java, OOP, Swing, Serializable

• Group project where I developed most (if not all) of the backend for a marketplace application.

### **Homelab Server Deployment**

Linux, CasaOS, Networking

- Built a personal homelab running Ubuntu Server for self-hosting files and media.
- Configured CasaOS apps for self-hosted applications (Plex, Gaming-Servers, monitoring dashboards, ollama).
- Implemented SSH remote access with tailscale.

#### **Carcassonne Markov Chain Model**

Python, NumPy, Stochastic Processes

- Analyzed the board game with Markov Chains.
- Broke down the game to find a possible strategy.

Personal Website Jekyll, GitHub Pages

- Developed a personal academic site hosting my CV and my academic coursework. Saved money by not using the cloud.
- Styled site with responsive layout, improving readability and structure for peers.

## **Technical Skills**

Programming: Python (NumPy, pandas, scikit-learn, Matplotlib, plotnine), Java, R, Matlab, LTFX

Data/ML: Supervised & unsupervised learning, PCA, Regression, model evaluation, Data Visualization, Optimization

**Tools:** Git, Jupyter, GitHub Pages, MySQL, PyTorch

Languages: Spanish (native), English (fluent/bilingual), German (beginner)

## Certifications / In Progress

Google Analytics: Foundations, Data, Data, Everywhere (in Progress)
Amazon: Getting Started with AWS and Data Analytics (in progress)

## Additional

Please go checkout my website where you'll learn more about me and the projects I've worked on.