

LACHLAN C. HAYDON

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EDUCATION

Loyola University Chicago

B.S. Physics | B.B.A. Information Systems & Business Analytics | GPA: 3.57

Chicago, IL

Expected May 2026

- **Relevant Coursework:** Quantum Mechanics, Computational Physics, Electricity & Magnetism, Optics, Electronics, Thermodynamics and Statistical Mechanics, Data Mining & Predictive Analytics, Python Programming, System Analysis and Design, Database and Data Warehousing Methods

TECHNICAL SKILLS

Programming: Python (NumPy, Pandas, SciPy, Matplotlib, Seaborn, Tkinter) SQL, R, C++ (*Exposure through ROOT*)

Software Development: GUI development, database optimization, object-oriented programming, technical documentation

Data & Analysis: Large-scale data processing, timing systems, statistical modeling, signal processing, data visualization

Tools: Jupyter, Tableau, Claude Code, Git, Microsoft Office, Google Workspace, LaTeX

PUBLICATIONS & PRESENTATIONS

L. Haydon, R. Abbasi, et al., "Studying the Optical Emission of Lightning at the Telescope Array Detector," American Physical Society Global Summit, March 2026

R. Abbasi, L. Haydon, et al., "Observation of a Downward Terrestrial Gamma-Ray Flash Associated with Dart Leaders," *Submitted to Journal of Geophysical Research - Atmospheres*

RELEVANT EXPERIENCE

Research Assistant – Computational and Atmospheric Physics

January 2025 – Present

Loyola University Chicago | Advisor: Dr. Rasha Abbasi

Chicago, IL

- Built analysis platform that reduced research team's analysis time by 10-20x; now used as standard tool by group
- Designed & implemented GUI application using Python/Tkinter with intuitive interface, real-time plotting, and error handling
- Engineered automated data pipelines processing multi-instrument datasets with Python automation.
- Created real-time visualization dashboards and publication-quality plots using matplotlib/seaborn to communicate spatiotemporal patterns
- Analyzed multi-modal sensor data from electromagnetic field detectors, optical arrays, and radiation detectors to identify correlation patterns in atmospheric phenomena
- Performed statistical analysis on temporal distributions to identify timing patterns; findings contributed to peer-reviewed publication submitted to Journal of Geophysical Research
- Collaborated with distributed research teams at University of Utah, RIKEN (Japan), and other institutions to validate findings and coordinate data sharing
- Documented workflows & trained team members on platform usage, ensuring successful adoption and knowledge transfer

Risk Management Analyst – Summer Intern

June 2025 – August 2025

Marsh

Chicago, IL

- Managed complex data analysis supporting 85+ commercial insurance policies worth millions in premium value
- Built technical deliverables including policy summaries, exposure schedules, and coverage comparisons for executive decision-making
- Coordinated stakeholder communications with clients and external parties in fast-paced business environment

LEADERSHIP EXPERIENCE

Vice President

Loyola Physics Club

- Organize event and presentations for undergraduate physics community

Lead Writing Center Tutor

Loyola University Chicago

- Promoted to leadership role among 60+ tutors; developed training materials and mentored new team members
- Translated complex technical concepts into accessible language for diverse audiences

Physics Tutor

Loyola University Chicago STEM Center

- Tutor undergraduate physics including quantum mechanics, electromagnetism, and computational methods

Safety Officer, Executive Board

Loyola Club Swim Team

- Manage safety protocols and risk management for competitive swim team; elected by team members to executive board position

HONORS & AWARDS

Mulcahy Fellowship for Research Excellence

Awarded May 2025

Loyola University Chicago

Sigma Pi Sigma

Honor Society for Academic Performance in Physics

Dean's List

College of Arts & Sciences, Quinlan School of Business

ADDITIONAL EXPERIENCE

Lifeguard & Swim Coach

May 2019 – Present

Halas Recreation Center, Loyola University Chicago

Chicago, IL

- Worked as a Lifeguard and Swim Coach Part-Time for Past 7 years, currently at Halas Recreation, worked for many other facilities in the past

Assistant Grounds Keeper

Summer 2023, 2024

Saint Simon Parish & School

Los Altos, CA

- Summer job for first two years of school, contributed to a great community that supports me and countless others