ANDREW HAH

(929) 319-6525 | andrewhah@uchicago.edu | **andrewhah.com** | **LinkedIn** | **Medium**

EDUCATION

University of Chicago   **Expected 2026**
- *B.S. Candidate in Mathematics, Computer Science*
- **Cumulative GPA:** 3.8/4.0
- **Clubs/Societies:** AI @ UChicago (Board Member), Maroon Capital (Analyst)
- **Relevant Coursework:** Accelerated Analysis in Rn, Honors Discrete Math, Abstract Linear Algebra, Database Systems, Systems Programming, Honors Calculus (IBL)

RESEARCH/WORK EXPERIENCE

UChicago Department of Mathematics | *REU Participant*   **June 2024 - August 2024**
- Advised by Professor David Cash
- Conducted advanced research in lattice-based cryptography, focusing on the applications of abstract algebra to Ring-SIS (Shortest Integer Solution) and Ring-LWE (Learning with Errors)
- Authored an expository paper covering key breakthroughs and open problems in the field such as unbounded fully homomorphic encryption schemes and unbounded attribute-based encryption

UChicago Department of Computer Science | *Research Assistant*   **Mar 2024 - Present**
- Advised by Professor Junchen Jiang
- Developed an innovative backend procedure for a cutting-edge large language model (LLM), accelerating the processing of input data and reducing response times for long text files by 300%
- Fully integrated the frontend and backend of this LLM for use-case experimentation and presentation
- Conducted extensive testing and evaluation of GRACE [Website][Paper] and utilized PyTorch to train and fine-tune the neural video codec's encoder and decoder models, enabling the system to achieve superior loss resilience under various packet loss conditions

Oedo Group | *Software Engineer Intern*   **Jun 2023 - Aug 2023**
- Conducted research to identify inefficiencies in a transportation system for tourists; gathered and analyzed travel data including boat timings, passenger volume, and seasonality to identify patterns affecting wait times.
- Helped design and implement a regression model tailored to minimize wait times, and utilized quantitative and logical reasoning to develop efficient solutions in a fast-paced environment

Cornell University Department of Global Development | *Researcher*   **Jul 2022 - Mar 2023**
- Advised by Professor Parfait Eloundou-Enyegue
- Applied statistical analysis and data interpretation skills to produce new quantitative evidence for the non-linear relationship between time spent studying and depression, and the interaction effect of students' years in school over the relationship between gender and depression level.
- Research paper accepted to and presented at the 2023 Sociology of Education Open Session hosted by the American Sociological Association (ASA).

PROJECTS

Satellite Imagery to Predict House Prices   **[Project]**
- Obtained and cleaned dataset through web-scraping of online real estate marketplace Zillow
- Engineered a combined, hybrid neural network model integrating both tabular data and image data, leveraging the powerful feature extraction capabilities of a pre-trained Inception model for nuanced insights.

SKILLS & INTERESTS

Technical Skills: C, Python, Rust, PostgreSQL, HTML, CSS, JavaScript, PyTorch, pandas, NumPy
Interests: Squash, Tennis, Poker, Abstract Art, Fashion, Philosophy