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Lucas JengMahn Gen

He/Him/His

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GitHub LinkedIn
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Education

Princeton University — **Princeton, NJ**
B.S.E (Bachelor of Science in Engineering) Computer Science — Class of 2023

The University of Chicago — **Chicago, IL**
MS Computer Science — Class of 2024

Work Experience

Vertaix — **Princeton, NJ (remote work)**
Researcher — Jan 2023–Present

- Worked closely with Professor Adji Bousso Dieng and her PHD students in her research lab (Vertaix).
- Performed domain adaption and fine-tuning on a pretrained large language model to get it to complete the descriptions of materials given only its formula.
- Created custom domain-specific tokenizer and showed how this can be used to improve our model's performance, even on smaller models with less data, and evaluated the results on a number of metrics.
- Wrote up findings in a technical paper found here: Independent Work Spring 2023. The research is ongoing and we are currently working on a more formal paper to submit.

National Journal — **Washington, DC (remote work)**
Software Engineering Consultant — June 2023–Aug 2023

- Was the main point of contact in a team of researchers to advise and assist on all technical/programming related problems.
- Created a custom solution using open source models to transcribe and diarize hundreds of interviews with an accuracy significantly higher than the previous technique, saving hundreds of hours of manual revisions to these transcripts.
- Advised and assisted in the creation of a custom chatbot trained on an internal database of knowledge.

Moovila — **Charleston, SC**
Software Engineer — May 2022–Aug 2022

- Created and maintained a database to track the historical progress of every project and task in production, used to provide statistical proof to some of Moovila's core features and wrote a white paper describing these findings.
- Jumpstarted Moovila's prediction technology by creating ML pipelines in AWS Sagemaker which will be used to make predictions on task owner performance and task competion rates in the future.

Puerto Rico Science, Technology, and Research Trust — **Sacramento, CA**
Software Engineer — Jun 2021–Aug 2021

- Independently researched and developed the API to collect and compute the information needed for a renewable energy dashboard to support Puerto Rico's Energy Public Policy Act which requires the complete transition to renewable energy sources.
- Designed and created prototypes for the publication and accessible display of this information to the people of Puerto Rico in order to track the progress towards renewable energy and keep the government accountable.

Leadership Experience

President of Princeton Charter Club — Dec 2021–Dec 2022

- Responsible for the day-to-day undergraduate operations of the Club for its over 180 members.
- Runs regular meetings with Princeton Charter Club's Board of Governors and undergraduate officers.
- Elected by Princeton Charter Club members through a process of speeches and debates.

Captain of Princeton University's Divison I Men's Soccer Team — Nov 2021–May 2023

- Helped lead Princeton to their second undefeated Ivy League championship in school history, earning the following awards along the way: Academic All-Region, First Team All-Ivy (2x), The Doctor William Trevor Trophy.
- Elected by coaches and teammates as captain and leader of the team.

Significant Projects

Solar Panel Detection and Size Approximation From Satellite Images — Sep 2021–Jan 2022

- Developed an image classifier using a convolutional neural net to detect solar panels in satellite images.
- Designed to improve the data collection for the PRSTRT's renewable energy dashboard's API.
- Wrote up findings in a technical paper found here: Independent Work Fall 2021.

Princeton Meal Exchange Website — Mar 2022–Mar 2022

- Used daily by hundreds of Princeton sophomores to sign up for, drop, and exchange meals at their eating club.
- Built in the span of four days to replace a website formerly maintained by Princeton University.