Evan Chapple

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EXPERIENCE

Universität des Saarlandes — *Research Intern (HiWi)*

February 2025 - December 2025

Trained various toy models on performing multi-digit addition and subtraction using PyTorch and in-house datasets, to illustrate from a mechanistic view how "carry" is performed in small models. Trained linear probes to extract sign information in subtraction problems, highlighting how representation and generation do not line up across various modern LLMs. Exploring how typicality of few-shot instances affects categorization accuracy.

CNRS - LORIA (Laboratoire Lorrain de Recherche en Informatique) — *Research Intern*

July 2024 - October 2024

Conducted research on improving RDF-to-text generation tasks using generation and augmentation techniques, focusing on datasets such as WebNLG and KELM. Achieved a **~16 point improvement in BLEU score** over the baseline on the Russian WebNLG test split, establishing a new state-of-the-art and developed a novel test dataset to evaluate system performance on unseen properties and large graph sizes.

Indiana University — *Undergraduate Researcher*

October 2021 - May 2023

Designed and executed a study investigating the impact of AI prediction interpretability on user reliance. Explored how noise in an audio stimulus and linguistic cues influence user dependence on AI predictions in varying confidence situations.

EDUCATION

Universität des Saarlandes — *Language Science and Technology (M.Sc.)*
Joint Masters: Erasmus Mundus program on Language and Communication Technology
October 2024 - February 2025: GPA (German): 1.2/5

Université de Lorraine — *Natural Language Processing (M.Sc.)*
Joint Masters: Erasmus Mundus program on Language and Communication Technology
August 2023 - June 2024: GPA (French): 17.66/20

Indiana University — *Computational Linguistics BS & Psychology BA*
Minors in Computer Science, Economics, and Second Language Studies
August 2019 - May 2023: GPA: 3.97/4.00

Highest Distinction, Departmental Honors (CompLing), Hutton Honors College Distinction

PAPERS

Identifying a Circuit for Decision-Making in Qwen3-4B — Master's Thesis

Identified a four-stage circuit for performing decision-making tasks in Qwen3-4B. Incorporated tools such as activation patching, logit lens, and probing to verify circuit correctness and to identify the specific information being passed at all stages of computation.

Multilingual Verbalisation of Knowledge Graphs —Findings of EMNLP 2025

Constructed a robust, multilingual KG-to-text dataset that includes 5 high-resource and 4 low-resource languages by extracting unseen domains from Wikidata and annotating and verifying silver lexicalisations and translations. This dataset serves as a new baseline for multilingual KG-to-text tasks in the future.

Can LLMs subtract numbers? — EMNLP 2025 MathNLP Workshop

Performed a probing analysis to extract if LLMs represent that a subtraction should be negative, when the output does not contain the negative sign. Tested across a plethora of models and verified that late model layers store information regarding the sign in subtraction of $a - b$ when a < b with probe accuracy of nearly 100%.

Fine-Tuning, Prompting and RAG for Knowledge Graph-to-Russian Text Generation. How do these Methods generalise to Out-of-Distribution Data? — Proceedings of INLG 2025

Developed a new state-of-the-art for Russian data-to-text lexicalisation using few-shot prompting and sophisticated few-shot retrieval using predicate overlap and graph size along with language specific lexicalisations.

SKILLS

Python

Java

Git

Unix

HuggingFace

RAG

Mechanistic Interpretability

Rust

AWARDS

Erasmus Mundus Scholarship - 2023-2025

Fulbright Fellowship - 2023 (declined)

Executive Dean's List - 2019-2023

Psi Chi (Psychology Honors Society) - 2022

Phi Beta Kappa - 2022

Founder's Scholar - 2021-23

Inducted into Honors College - 2019

Provost Scholarship - 2019-2023

National Merit Scholar - 2019-2023

AP Scholar with Distinction - 2019

National Spanish Exam, Gold - 2019

Le Grand Concours, 4th - 2018

LANGUAGES

English, Native

French, Advanced High

Spanish, Advanced Medium

Italian, Intermediate High

German, Intermediate Medium

Russian, Intermediate Low