# Lucas Cecchi

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#### **WORK EXPERIENCE**

#### J.P. Morgan Chase & CO

New York, NY

March 2022 - present

Software Engineer III, AI Research

- Collaborated with researchers on projects building scalable AI-powered internal applications built in Python and C++
- First and co-authored papers on agentic systems and NLP, notably a first author paper at EMNLP 2024
- Promoted from Software Engineer II to III in February 2023
- Fine-tuned open source models from HuggingFace for text generation and classification tasks
- Scaled and optimized proof-of-concept applications using AWS Services (ECS, S3, Lambda, DynamoDB, Opensearch, Glue, and Sagemaker) provisioned with Terraform
- Lead an application from proof-of-concept stage to production: a platform for scraping and analyzing SEC data with embedding-based retrieval and LLMs, currently serving 1,000+ users and generating \$36 million in revenue per year

## The Natural Language Processing Laboratory at Penn State

University Park, PA

Research Intern

Aug 2021 - Dec 2021

- Designed and implemented NLP models for sentiment analysis, part-of-speech tagging and data augmentation using BERT, GloVe, GPT-2, and GANs
- Utilized a machine translation pipeline to generate a synthetic dataset of question/answers, used to train a BERT model for automatic short answer grading

### MILA Quebec Artificial Intelligence Institute

Montreal, Canada

Research Intern

May 2020 – Aug 2020, May 2021 - Aug 2021

- Contributed to open source Python projects continuum and Sequoia, co-authored Sequoia publication
- Ran large scale Continual Learning and Reinforcement Learning experiments on MILA compute cluster using Slurm
- Audited graduate level courses on Reinforcement Learning and Self-Supervised Learning

### **TECHNICAL SKILLS**

Programming Languages: Python, Terraform, C, C++, CUDA, SQL, Java, Rust

Libraries and Frameworks: Pandas, Pytorch, Numpy, Huggingface, Ray, Xgboost, Sklearn, FairSeq, Faiss, MPI, OpenMP

**Data Management:** Redis, Spark, Opensearch, MySQL **Containerization and Deployment:** Docker, Kubernetes

Cloud: AWS, S3, ECS, Glue, DynamoDB, Sagemaker, Opensearch Service

## **EDUCATION**

Bachelor of Science

## The Pennsylvania State University

University Park, PA

December 2021

Major in Computer Science; Minor in Mathematics Cumulative GPA: 3.4/4.0; Major GPA: 3.7/4.0

Coursework: Operating Systems; Data Structures and Algorithms; Artificial Intelligence

#### RECENT RESEARCH

- Lucas Cecchi, Petr Babkin. ReportGPT: Human-in-the-Loop Verifiable Table-to-Text Generation, Empirical Methods in Natural Language Processing Industry Track 2024
- William Watson, Nicole Cho, Nishan Srishankar, Zhen Zeng, Lucas Cecchi, Daniel Scott, Suchetha Siddagangappa,
  Rachneet Kaur, Tucker Balch, Manuela Veloso. <u>LAW: Legal Agentic Workflows for Custody and Fund Services Contracts</u>,
  International Conference on Computational Linguistics Industry Track 2025
- Nicole Cho, Nishan Srishankar, Lucas Cecchi, William Watson. <u>FISHNET: Financial Intelligence from Sub-querying</u>,
  Harmonizing, Neural-Conditioning, Expert Swarms, and Task Planning, International Conference on AI in Finance 2024