Laura Penier

Machine Learning Engineer

Email address | Github URL | Linkedin URL | Phone number

Specializes in the design and implementation of deep/machine learning algorithms.

EDUCATION

CARNEGIE MELLON UNIVERSITY

B.S. Computer Science | Sep 2015 - Dec 2019

- GPA: 4.09 / 4.33
- Relevant Coursework: Deep Learning, Advanced ML, Probabilistic Graphical Models, Convex Optimization

WORK EXPERIENCE

TWITTER, INC.

Software Engineering Intern, Twitter Search | June 2020 - August 2020

- Implemented knowledge distillation training for Search ranking models; performed offline and online experiments and analysis; deployed the end model to production.
- Used Java for data generation, Scala+scalding for analysis, Python+tensorflow for model implementation.
- New model brings in daily 1.55M+ tweet clicks and 48K+ social actions (favorites, retweets, etc.) on search results.

CARNEGIE MELLON MACHINE LEARNING DEPARTMENT

Graduate Research Assistant | Sept 2018 - Present

- Focusing on Bayesian optimization.

PROJECTS

ChemBO: JOINT OPTIMIZATION & SYNTHESIS OF ORGANIC MOLECULES

Research Project at CMU | Spring 2019

- Developed an algorithm for molecular optimization with synthesizable recommendations that performs state-of-the-art optimization with less queries than alternatives on common benchmarks.
- Implemented a surrounding framework for custom objectives, exploration strategies and domains, and integrated with existing Bayesian optimization package Dragonfly.

GRAPH NEURAL NETWORKS AS INFERENCE ENGINE

Course Project at CMU 10-708 — Probabilistic Graphical Models | Spring 2019

- Experimented with scaling up inference in probabilistic graphical models with graph-based neural nets.
- Designed the experiment pipeline and led the team to work a ½ semester time frame.

END-TO-END SPEECH RECOGNITION SYSTEM

Homework Project at CMU | Fall 2018

- Implemented a system for generating speech transcriptions from audio with attention, input-output masking and beam coding. Levenshtein distance 15 on WSJ dataset.

ADDITIONAL

- **Skills:** Deep Learning R&D, Applied ML competitions, Optimization, Algorithms, Probability & Statistics
- **Languages:** Python (daily use), C++, Java (learning)
- **Software:** Pytorch, Edward, CUDA C, git/github, SQL, Latex