Jeremy Macks

Machine Learning Engineer/Cognitive Scientist

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EXPERIENCE

FACTSET RESEARCH SYSTEMS | SOFTWARE ENGINEERING INTERN
May 2021 – August 2021 | New York City, NY

- ➔ Built prototype for matrix multiplier method using AWS and C++ for quantitative risk analytics team.
- ➔ Researched, tested, and presented different strategies for optimizing matrix multiplication cost and time.
- ➔ Worked in a biweekly agile scrum, collaborating with multiple departments in FactSet.

LACAI LABS | MACHINE LEARNING RESEARCHER
January 2021 – May 2021 | Troy, NY

- ➔ Employed in undergraduate research project under Professor Tomek Strzalkowski.
- ➔ Researched topic modeling algorithm for use in agenda classification problem for French Election twitter data.
- ➔ Trained, tested, and validated multiple dialogue act classification algorithms, eventually fine-tuning an attention based model using sequence prediction.
- ➔ Created Python module PySCILTagger and prepared the module for research use.

RENSSELAER POLYTECHNIC INSTITUTE | UNDERGRADUATE MENTOR
January 2021 – May 2021 | Troy, NY

- ➔ Assisted lecturer in maintaining timely schedule by grading assignments and holding office hours.
- ➔ Covered topics including documentation, version control, databases, web development, open source licensing, app development, testing, Tensorflow, and others.

PROJECTS

CHESS ENGINE | PYTHON, STOCKFISH
2021

- ➔ Utilized Monte Carlo Tree Search method to create a chess engine which determined the best next move and played against itself.
- ➔ Engine played against different ratings of Stockfish, an open source chess AI in order to determine approximate level of the engine.

HOMEMADE SVM | PYTHON, CVXOPT, MATPLOTLIB
2021

- ➔ Designed and implemented and algorithm for Support Vector Machines (SVM) from scratch with various regularizers and kernels. Achieved 97% accuracy on binary classification task.

SENTIMENT ANALYSIS | PYTHON, SKLEARN, TWEEPY
2020

- ➔ Scraped, structured, and built dataset of political figure's Twitter history.
- ➔ Trained a highly scalable language processing model using supervised learning on a dataset of 50,000 IMDb reviews.
- ➔ Ran an analysis of average sentiment and political part affiliation in order to test for correlations and outliers.

SKILLS

PROGRAMMING

Languages
Python • C++ • C • CMake • C# • LaTeX • Java

LIBRARIES/FRAMEWORKS

PyTorch • Tensorflow • SpaCy • Pandas • SKlearn • Matplotlib • NumPy • SciPy • NLTK • Transformers • OpenCV

TOOLS/PLATFORMS

Git • AWS • CUDA • RStudio • UNIX • Unity • Jupyter Notebooks

CURRENTLY LEARNING

Haskell • SQL • Meta-Learning • Ensemble Methods

EDUCATION

RENSSELAER POLYTECHNIC INSTITUTE
MASTER'S IN COGNITIVE SCIENCE, CO-TERMINAL PROGRAM
Fall 2022 - Spring 2023

RENSSELAER POLYTECHNIC INSTITUTE
BACHELOR'S IN COMPUTER SCIENCE AND COGNITIVE SCIENCE
August 2018 - May 2022 | Troy, NY
School of Science
Cum. GPA: 3.2 / 4.0

COURSEWORK

UNDERGRADUATE

Machine Learning from Data • Information Retrieval • Human and Machine Learning • Game AI • Computer Vision • Programming for Cogs and AI • Research Methods and Statistics