

Jeremy Macks

Machine Learning Engineer/Cognitive Scientist

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EXPERIENCE

JACOBS SOLUTIONS | JOHNSON SPACE CENTER | NASA MACHINE LEARNING INTERN

May 2022 – October 2022 | Houston, TX

- Contributed to a small interdisciplinary team supporting the ISS crew and various other researchers focusing on International Space Station imagery.
- Compared various state of the art image detection models, assessing performance for potential production use.
- Developed pipeline for recognizing text in various different backgrounds from a custom dataset of NASA imagery.

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.
- Utilized AWS Graphics Instances, programming specifically on the GPU and utilizing CUDA for optimization.

LACAI LABS | MACHINE LEARNING RESEARCHER

January 2021 – May 2022 | 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.

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

AUTOMATED REDDIT ACCOUNT DETECTOR PYTHON, PRAW, PYTORCH, NUMPY

2022

- Scraped large amounts of social media data from Reddit, some generated from large language models, some generated by real users.
- Currently training and building a fine-tuned transformer model to complete classification of the author of the comments.

SENTIMENT ANALYSIS PYTHON, SKLEARN, TWEETPY

2020

- Scraped, structured, and built dataset of various political figure's Twitter history.
- Trained a highly scalable language processing model using supervised learning on a dataset of 50,000 IMDb reviews.
- Controlled for average sentiment and political party affiliation in order to find statistically significant insights.

SKILLS

LANGUAGES

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

LIBRARIES/Frameworks

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

TOOLS/PLATFORMS

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

CURRENTLY LEARNING

Haskell • SQL • Ensemble Methods

EDUCATION

RENSSELAER POLYTECHNIC INSTITUTE

MASTER'S IN COGNITIVE SCIENCE, CO-TERMINAL PROGRAM

Fall 2022 - Spring 2023 | Troy

Cum. GPA: 3.8 / 4.0

RENSSELAER POLYTECHNIC INSTITUTE

BACHELOR'S IN COMPUTER SCIENCE AND COGNITIVE SCIENCE

August 2018 - May 2022 | Troy, NY

Cum. GPA: 3.2 / 4.0

COURSEWORK

UNDERGRADUATE

Machine Learning from Data • Information Retrieval • Human and Machine Learning • Game AI

GRADUATE

Computational Finance • Computational Vision • Economics and Computation