# Jeremy Macks

## Machine Learning Engineer/Cognitive Scientist

🏠 NYC  ⬛ macksjeremy  in jeremy-macks  ✉ 608macksjeremy@gmail.com  📞 917-716-6962

## 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.
- → Developed pipeline for recognizing text in various different background utilizing multiple deep learning models as well as transformers.
- → Researched and tested different models to be utilized and potentially fine-tuned for image detection task.

### 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.
- → Training and building a fine-tuned transformer model to complete classification of the author of the comments.

### SENTIMENT ANALYSIS  PYTHON, SKLEARN, TWEEPY    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

### PROGRAMMING

**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