

MICHAEL NEUDER

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EDUCATION

University of Colorado, College of Arts and Sciences

August 2015 - May 2020

Bachelor's in Computer Science, Bachelor's in Mathematics

Boulder, CO

- Computer Science GPA: 3.97 – Overall GPA: 3.85
- Studied abroad at University of Oxford, UK, Spring 2018
- Honorable Mention in Computational Research Association's [Undergrad Research Award](#)

INDUSTRY EXPERIENCE

Google

May 2020 - August 2020

Software Engineering Intern

TBD

- Incoming Summer 2020 intern

Google

May 2019 - August 2019

Software Engineering Intern – Google Flights

Cambridge, MA

- Built a tool to interact with internal airline data that reduces look up time by 100%
- Created a multi-threaded SQL Engine which improved query response time by 10x using async channels

Google

September 2018 - December 2018

Software Engineering Intern – Google Cloud

Sunnyvale, CA

- Built an automated pipeline which collects and cleans data, then trains and deploys machine learning models
- Integrated NLP algorithms into the Mobile Device Management system on the G Suite Platform

Lockheed Martin & Laboratory of Atmospheric and Space Physics

Feb 2017 - Oct 2017

Software Engineering Intern

Boulder, CO

- Created user friendly graphical applications using Python and C++ Qt Libraries
- Developed graphical application testing suites using EggPlant Functional software and the SenseTalk language

RESEARCH EXPERIENCE

Parkes Lab, Harvard University

August 2019 - December 2019

Research Assistant under supervision of Dr. David Parkes and Daniel Moroz

Cambridge, MA

- Studying off-policy deviations from the Proof of Stake and Proof of Work consensus protocols
- Exploring and categorizing the types of Smart Contracts being executed on the Ethereum blockchain.

Santa Fe Institute

June 2018 - August 2018

Undergraduate Research Fellow: Summer 2018 REU

Santa Fe, NM

- Created algorithms to extract animal paths from drone footage despite small animal size and camouflage
- Explored the research space of object tracking using software packages including [YOLO](#) and [Faster RCNN](#)

Bradley Lab, University of Colorado

April 2017 - Present

Research Assistant under supervision of Dr. Elizabeth Bradley

Boulder, CO

- Collaborated with an interdisciplinary research group to analyze time series climate data using information theory
- Developed and maintained the code base for the processing, analysis, and visualization of data

Mozer Lab, University of Colorado

March 2017 - Present

Research Assistant under supervision of Dr. Michael Mozer

Boulder, CO

- Implemented deep neural nets to analyze information content of text and predict human reading time
- Created Convolutional Neural Networks to evaluate image quality based on Computer Vision metrics

PUBLICATIONS

- J. Garland, T. Jones, **M. Neuder**, V. Morris, J. W. C. White, E. Bradley, “[Anomaly Detection in Paleoclimate Records using Information Theory](#),” *Entropy* **20**:931 (2018).
- **M. Neuder**, M. Mozer, “[Image Evaluation Using Deep Learning](#),” *Colorado Journal of Applied Mathematics* **Fall 2018 Edition**:43-54 (2018).
- J. Garland, T. Jones, E. Bradley, **M. Neuder** and J. W. C. White, “[Climate Entropy Production Recorded in a Deep Antarctic Ice Core](#)”, Submitted, *Chaos*.

PROJECTS

[Image Quality Analysis](#) [She](#)

Code written to conduct research for Dr. Mozer in Python using Tensorflow
A web app girlfriend simulator written in Ruby on Rails framework

TECHNICAL STRENGTHS

Programming Languages (Experienced)

C++, Python, Perl, Java

Programming Languages (Proficient)

SQL, Ruby, R, Javascript, MATLAB, bash, CSS, HTML

Tools

git, TensorFlow, CUDA, Linux, macOS, Jupyter, LaTeX, Travis CI