MICHAEL NEUDER

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EDUCATION

University of Colorado — August 2015 - Present
B.A. Computer Science, B.A. Mathematics — *Boulder, CO*

- Computer Science GPA: 3.97 - Overall GPA: 3.82.
- Studied abroad at University of Oxford, UK, in the Spring of 2018.

INDUSTRY EXPERIENCE

Google — September 2018 - December 2018
Software Engineering Intern — *Sunnyvale, CA*

- Working as a fall intern with the Google Endpoint Management Team writing application recommendation software.
- Using state of the art Natural Language Processing algorithms to rank applications based on descriptions.
- Integrating algorithms into production for Mobile Device Management on the G Suite Platform.

Lockheed Martin / Laboratory of Atmospheric and Space Physics — Feb 2017 - Oct 2017
Software Engineering Intern — *Boulder, CO*

- Developed graphical applications using Python and C++ Qt Libraries.
- Wrote interactive terminal applications using Perl and the Curses Module.
- Developed graphical application testing suites using EggPlant Functional software and the SenseTalk language.

RESEARCH EXPERIENCE

Santa Fe Institute — June 2018 - August 2018
Undergraduate Research Fellow — *Santa Fe, NM*

- Participated in the 2018 Research Experience for Undergraduates program.
- Developed novel machine learning algorithms to track animal movement from drone videos.

Department of Computer Science — April 2017 - Present
Research Assistant in the lab of Dr. Elizabeth Bradley. — *Boulder, CO*

- Worked collaboratively with an interdisciplinary research group to analyze time series climate data.
- Developed and maintained the code base for the project using Python.
- Created publication style figures for visualizing the data and results.

Institute of Cognitive Science — March 2017 - Present
Research Assistant in the lab of Dr. Mike Mozer — *Boulder, CO*

- Implemented deep neural nets to analyze information content of text and predict human reading time.
- Created deep parallel convolutional neural networks to evaluate image quality.
- Created visualizations of network parameters and outputs using Python.

PUBLICATIONS

- *Submitted* J. Garland, T. Jones, E. Bradley, M. Neuder and J. W. C. White, "Climate Entropy Production Recorded in a Deep Antarctic Ice Core", arxiv preprint.
- *Submitted* to SIAM Conference on Mathematical & Computational Issues in the Geosciences – J. Garland, T. Jones, E. Bradley, M. Neuder and J. W. C. White, "Targeted Re-Investigation of Paleoclimate Records Using Information Theory."
- *Accepted* to the Colorado Journal of Applied Mathematics – M. Neuder, M. Mozer, "Image Evaluation Using Deep Learning."

PROJECTS

Image Quality Analysis	Code written to conduct research in Python using Tensorflow.
Connect Four	Created a graphical implementation of the game in PyQt.
Rubik's Cube Solver	Wrote a program in C++ that solves a cube from any scrambled position.
She	A web app written in Ruby on Rails.

TECHNICAL STRENGTHS

Programming Languages (Experienced)	Python, C++, Perl, Java
Programming Languages (Proficient)	Ruby, R, Javascript, Matlab, bash, CSS, HTML
Libraries (Python)	numpy, scipy, matplotlib, tensorflow, scikit-learn, Qt