

RYLAN SCHAEFFER

SKILLS

Languages

Python
R
Go
MATLAB
C/C++

Libraries

TensorFlow
PyTorch
NumPy
Pandas
SciPy
Keras

Query Languages

SQL (MySQL, Postgres, SQLite)
Presto
Hive

Operating Systems

Linux
macOS
Windows

Neuroscience Tools

Amazon Mechanical Turk
Gorilla
Statistical Parameter Mapping

Contact

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EDUCATION

University College London | September 2018

Master of Research, Cognitive Neuroscience
Distinction (British Equivalent of 4.0 GPA)
Coursework includes Advanced Deep Learning and Reinforcement Learning by Google DeepMind
Founded and managed UCL Artificial Intelligence Journal Club (25 speakers in 9 months from DeepMind, OpenAI, Uber AI Labs, Toronto, MILA, Stanford, Berkeley, Princeton, Oxford, Cambridge, Imperial and more)

University of California, Davis | June 2016

Bachelor of Science, Computer Science Engineering
Bachelor of Science, Statistics
Outstanding Senior Award, Department of Computer Science and Engineering
University of California Regents Scholar
Designed and taught 3 undergrad courses: Blockchain Technologies, History of Computer Science, Davis Hacks

EXPERIENCE

Uber | October 2018 - Present

Data Scientist, Intelligent Decision Systems Team
Time series forecasting and anomaly detection.

Wellcome Centre for Human Neuroimaging, Metacognition Group | September 2017 - September 2018

Computational Cognitive Neuroscience Researcher
Proposed and executed two research projects under Dr. Stephen Fleming:
1) Novel human behavioral experiment to test how the stability of beliefs influences subjectively reported confidence. Collected data via Gorilla and Amazon Mechanical Turk. Analyzed results using two-way mixed-effects repeated measures ANOVA and mixed-effects regression in R.
2) Deep reinforcement learning experiment to explain diverse mammalian experimental results in the metacognition literature, including the dissociability of action from evaluation, the ubiquity of hyper-metacognitive sensitivity and the response-locked error-related negativity. Proposed and implemented a theoretically-grounded modification of the Advantage Actor-Critic architecture in TensorFlow.

Thermo Fisher Scientific | May 2017 - September 2017

Deep Learning Research Intern
Demonstrated applicability of deep learning to DNA sequencing by researching, proposing, implementing, training and testing a sequence-to-sequence RNN-based architecture with 99.24% test accuracy. Identified missing TensorFlow functionality and implemented own solution. Constructed pipeline for converting MySQL data to TFRecords and creating queues for reading and batching data. Provisional patent filed.

Personal Project: Deep Learning Research | December 2016 - April 2017

Independent Student
Implemented "Learning to Protect Communications with Adversarial Neural Cryptography" by Abadi and Andersen in TensorFlow.

Graduate Course Term Project: Professional Online Sports Betting | January 2016 - April 2016

Python Developer
Developed data pipeline to profit from online daily fantasy sports websites. Scraped and cleaned NBA data. Modeled individual player performance using XGBoost. Formalized lineup selection as integer programming problem and implemented solver that outperformed industry standard in 47% of cases and tied in 50%.

UC Davis, Dept. of Computer Science Undergraduate Researcher | Sept 2015 - June 2016

Python Developer
Led team to develop an online testing platform for use in UC Davis classes. Deployed in two courses to approx. 75 undergraduates. Built server to push test problems client-side and to accept student submissions.

BLOG | JANUARY 2017 - MAY 2017

Published analyses of exciting new papers in artificial intelligence research. Posts topped HackerNews and r/MachineLearning and surpassed twenty thousand unique readers in a month. Examples:
[Neural Episodic Control by Pritzel et al.](#)
[Early Visual Concept Learning with Unsupervised Deep Learning by Higgins et al.](#)
[Overcoming Catastrophic Forgetting in Neural Networks by Kirkpatrick et al.](#)
[Neural Turing Machine by Graves et al.](#)

EXPERIENCE CONTINUED

Associated Students of UC Davis | April 2014 - February 2015

Chief Financial Officer and Chief Operating Officer

Authored ASUCD's \$12 million budget. Solved \$100,000 annual deficit. Managed and improved operating efficiency of 26 businesses and services. Hired unit directors and professional career staff advisor.

Accomplishments include merging Campus Copies/Classical Notes with Post Office to halve labor costs and restructuring Experimental College's and Whole Earth Festival's operating models for future stability.

UC Davis, Chancellor's Undergraduate Advisory Board | October 2012 - June 2014

Board Member

Researched, proposed and implemented a program to enable undergraduate students to design and teach courses on topics of their choosing to fellow undergraduates. Worked with Academic Senate and Administration. Subsequently taught three courses and helped at least seven students teach their courses.

Associated Students of UC Davis | January 2012 - April 2013

Business and Finance Commission Chair (2012-2013), Commissioner (2012-2012)

Advised ASUCD Senate and approved decisions on all financial matters.

TEACHING

UC Davis Computer Science Department | April 2016 - June 2016

Student Instructor, Cryptocurrency Technologies

Designed and taught seminar to 23 students on leveraging distributed consensus protocols and cryptographic primitives to create decentralized digital cash. Covered advanced topics including Zerocoin, Enigma and the Bitcoin Lightning Network. Wrote programming assignments and grading scripts. Rated 4.3 out of 5.

UC Davis Computer Science Department | April 2015 - June 2015

Student Instructor, History of Computer Science

Designed and taught seminar to 15 students on the history of computer science, focusing on the historical convergence of electrical engineering and mathematical theory. Rated 4.72 out of 5.

UC Davis University Honors Program | April 2014 - June 2014

Student Instructor, Davis Hacks

Designed and taught seminar on optimizing the undergraduate experience at UC Davis.

UC Davis Computer Science Department | January 2015 - March 2015, January 2014 - March 2014

Lab Assistant, Introduction to Media Computation

Tutored students in Processing (a Java-like programming language) for visual arts.

UC Davis Computer Science Department | June 2014 - July 2014

Student Tutor, Data Structures and Algorithm Analysis

Tutored students on data structures, sorting, and graph algorithms.

SERVICE

UC Davis College of Engineering Dean Recruitment Advisory Committee Undergraduate Representative | October 2014 - June 2015

UC Davis Chancellor's Ambassador | October 2012 - June 2014

KDVS Radio Host on Davis Now! A Current Event Talk Show with Guests | July 2014 - October 2014

AWARDS AND HONORS

UC Davis Dept. of Computer Science Outstanding Graduating Senior | June 2016

UC Davis College of Engineering Student Commencement Speaker | June 2016

Tau Beta Pi Engineering Honor Society | June 2013

Phi Kappa Phi Honor Society | June 2013

University of California Regents Scholarship | September 2011

Premier Distinction (2,990 points), National Forensic League | June 2011

Congressional Debate Champion, 2011 Tournament of Champions | May 2011

Eagle Scout, Boy Scouts of America | May 2011

Party Chairman, California Boys' State | June 2010