

Daniel Berenberg

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Permanent Address:
7 Abingdon Avenue
Medford, NJ 08055

Education

University of Vermont Graduate College, Burlington, Vermont 2016 - 2018
M.S., Computer Science — 3.9/4.0

⇒ Selected Courses: Deep Learning, Machine Learning, Reinforcement Learning,
Principles of Complex Systems, Modelling Complex Systems

University of Vermont CEMS, Burlington, Vermont 2013 - 2017
B.S., Mathematics — 3.41/4.0

⇒ Minor: Computer Science; 40+ credits in Russian

St. Petersburg University, St. Petersburg, Russia Fall 2015
CIEE Study Abroad Program

Middlebury College, Middlebury, Vermont Summer 2015
Summer Intensive Russian Program

Professional Experience

University of Vermont Mathematics, Burlington, VT Current
Teaching Assistant - Data Science

Vermont Complex Systems Center - Bagrow Lab, Burlington, Vermont Fall 2017 - Current
Research Assistant

⇒ Intersecting applied mathematics and statistics with NLP/NLU to research the complex network of human causal attribution. Duties include developing robust Python-based computational linguistics research tools and implementing deep neural language models using Keras and Tensorflow.

Vermont Artificial Intelligence Laboratory (VAiL), Burlington, Vermont Summer 2018
Machine Learning Engineer

⇒ Designed and constructed AI system capable of predicting heart rate and respiratory rate from a noisy dataset of smart phone videos.
⇒ Implemented advanced video preprocessing and manipulation software using various Python libraries including OpenCV, PIL, numpy, and scipy.
⇒ Developed high performance 3D convolutional network using Keras and Tensorflow.

The Flatiron Institute - Computational Biology Lab, Manhattan, New York Summer 2017
Research Intern

⇒ Utilized advanced protein fold simulation codebase (Rosetta) and molecular visualization software (PyMOL) to research physically stable conformations of empirically unobserved protein structures. Duties included implementing various python and bash scripts to interface with the C++ codebase.

University of Vermont Computer Science, Burlington, Vermont Spring 2017
Teaching Assistant - Introduction to Java

Publications

Neural language representations predict outcomes of scientific research
J.P. Bagrow, D. Berenberg, and J. Bongard, Preprint (2018)

Skills

Programming/Scripting: Python, C/C++, Java, Unix Shell/Bash, Ocaml, Web Stack

Frameworks/Tools: Tensorflow, Keras, Scikit-Learn, scipy, numpy, git, L^AT_EX, Wordpress

Technical: OOP, functional programming, Agile development; networking, cloud/cluster computing

Languages: Russian ~ 2.1 on Language Proficiency Index

Other courses: Algorithm design, Data science, Software engineering, Operating systems

Leadership & Other Achievements

UVM Computer Science Fair, 3rd place Fall 2017

Dean's List Spring 2017

Treasurer, UVM Delta Tau Delta 2017

Departmental Honors, Russian 2015, 2016