Daniel Berenberg

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7 Abingdon Avenue
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Education

University of Vermont Graduate College, Burlington, Vermont — *December 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 — *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

Vermont Artificial Intelligence Laboratory (VAiL), Burlington, Vermont — *Summer 2018*
Machine Learning Engineer
⇒ Implementing deep learning system capable of predicting heart rate and respiratory rate from a smart phone video with super human accuracy. Applicable skills include developing high efficiency video processing software in Python libraries such as and implementing deep 3D convolutional neural networks using Keras and Tensorflow, integrating with Microsoft Azure cloud GPU service.

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.

The Flatiron Institute - Computational Biology Lab, Manhattan, New York — *Summer 2017*
Research Intern
⇒ Utilized advanced protein fold simulation codebase (Rosetta) and molecular visualization (PyMOL) software to research physically stable spatial configurations of empirically unobserved protein structures. Duties included implementing various python and bash scripts to interface with the underlying C++ codebase of Rosetta.

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, Ocaml, Web Stack

Frameworks/Tools: Tensorflow, Keras, Scikit-Learn, scipy, numpy, git, LaTeX, Wordpress

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

Languages: Russian $\sim$ 2.1 on Language Proficiency Index
Other courses: Algorithm design, Data science, Software engineering, Operating systems

Leadership & Other Achievements

UVM Computer Science Fair, 3^{rd} ***place*** — *Fall 2017*
Dean's List — *Spring 2017*
Treasurer**, UVM Delta Tau Delta** — *2017*