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# Julian Oks

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## EDUCATION

### **Masters, Computer Science, UMass Amherst. Baystate Fellow.**

2019 - 2020

GPA: 4.0

Selected Courses: 611 Advanced Algorithms, 670 Computer Vision,  
688 Probabilistic Graphical Models, 677: Distributed and Operating Systems, ...

Teaching Assistant for: 311: Introduction to Algorithms, 248: Intro to Data Science (lead TA)

### **B.A., Artificial Intelligence, Hampshire College**

2015 - 2018 (graduated early)

Concentration GPA: 3.95, Overall GPA: 3.81

Selected Courses: 682 Neural Networks, 590V Data Visualization & Exploration,  
683 Artificial Intelligence, 590S Systems for Data Science, ...

Teaching Assistant for: 263 Artificial Intelligence, 254 Genetic Programming

## SKILLS

- Machine Learning - NumPy, TensorFlow / Keras, Scikit-Learn, PyTorch, ...
- Algorithms - Graphs, Randomized, various paradigms, ...
- Systems - Spark, Hadoop/MapReduce, Giraph/Pregel, DBMSs, ...
- Visualization - D3, Javascript + SVG, Vega, dc.js, Bokeh, Crossfilter, ...
- Programming Languages - Flexible, but favors Python, JavaScript ES6, Clojure, ...
- Communication - Collaboration, Writing, Public Speaking, ...
- Adjectives - User-Friendly, Performant, Fault-Tolerant, Expressive, Flexible, Buggy, ...

## EMPLOYMENT

- ❑ Software Engineer, Google
  - Starting July 2020, Bay Area, California
  - YouTube
- ❑ Senior Data Science Intern, Data Science Elite Team, IBM
  - Summer 2019, New York, New York
  - Developed methods for low-sample, high-dimensional time series prediction. Developed machine learning models for rare event prediction. Created a user friendly pre- and post-processing framework. Worked on black- and white-box model explainability. Made an interactive dashboard that won IBM's AI hackathon.
- ❑ Lead Instructor, All Star Code
  - Summer 2018, New York, New York

Lead instructor for a class of 20 students and 4 TAs, run by a nonprofit whose mission is to teach technical and soft skills to young men of color. My primary responsibilities were giving lectures and developing curriculum.

❑ Intern, IBM Watson

Summer 2017, Durham, North Carolina

Developed web-based knowledge discovery tooling for the purpose of creating, visualizing, and editing ontologies. Developed intelligent disambiguation techniques, a custom ontology representation, and intelligent querying abilities. Machine learning models were made both from and for these ontologies.

❑ Research Assistant, Creative Machines Lab, Columbia University

2016-2017, Columbia University, New York, New York

See “Academic Lab Experience” section.

### **ACADEMIC LAB EXPERIENCE**

❑ VAIL (Visualization with Artificial Intelligence Laboratory)

2017-2018, Amherst, Massachusetts

Founding member of the VAIL lab, where we used Artificial Intelligence to make better visualizations, and visualizations to make better Artificial Intelligence systems. I worked on optimization of visualizations, developing visualizations that explain the behavior of Neural Networks, and integrating machine learning with ontologies.

❑ Creative Machines Lab, Columbia University

2016-2017, Columbia University, New York, New York

Software and machine learning lead on the Spyntra project, a quadruped robot. Worked on topology optimization problems like 3D reconstruction and automatic design of electrodes. I developed systems that derive self-models of machines, creating both explicit structural models as well as implicit inferential neural network models. I advised groups on where and how to implement machine learning into their projects.

❑ Hampshire College Computational Intelligence Laboratory

2015-2017, Amherst, Massachusetts

Worked on Genetic Algorithms and Genetic Programming. My research focused mainly on genetic representations of Neural Networks and physical robots, for the use of Neural Architecture Search and Robot Self-Modeling.