

(Russell) Kenny Jones

Redwood City, CA • (650)269-5954 • rukjones4@gmail.com • <https://rkjones4.github.io/>

Education

Williams College, Williamstown, MA

Class of 2017

- Bachelor of Arts, Magna Cum Laude
- Majors: Computer Science and English
- GPA: 3.96

University of Edinburgh, Edinburgh, Scotland

Spring 2016

- Visiting student in the College of Science and Engineering

Professional Experience

Machine Learning Engineer, Facebook

Fall 2017 – Present

Social Good Team

- Focused on improving the distribution and efficiency of fundraising efforts on Facebook
- Developed and maintained news feed prediction models specific to fundraising actions
- Increased accuracy of NLP models identifying posts that contain fundraiser creation intent
- Responsible for over 25% of team's top-line growth since joining

Software Engineering Intern, Facebook

Summer 2016

Experimentation Platform Team

- Designed python script for ad hoc statistical analysis of custom experiment data sets
- Worked full stack to integrate program into existing back-end and front-end infrastructure

Research Experience

Art Generation with Deep Networks – GANGogh

Winter 2016 – Summer 2017

Independent Study supervised by Professor Andrea Danyluk

- Created generative adversarial network that produced novel 64x64 pixel art in 14 genres
- Built python scripts to scrape, clean and label 80,000 images from Wikiart.org
- Designed a model architecture combining elements from improved W-GAN and AC-GAN
- Induced further differentiation between generated art styles through extensive pre-training of the discriminator network and adding global conditioning strategies to the generator network
- Resulting discriminator outperformed past literature accuracy values on our Wikiart dataset

Music Genre Classification with Convolutional Neural Networks

Fall 2016

Machine Learning Final Project supervised by Professor Andrea Danyluk

- Created CNN to predict the music genre of a song given a 30 second audio clip
- Transformed audio files into spectrograms and trained our model on raw pixel-data
- Developed data augmentation strategy to increase number of training samples by 10x
- Achieved over 85% cross-validation precision on 10-genre GTZAN dataset

Encoding Information Using Recognition Memory

Summer 2015

Summer Research Assistant supervised by Professor Brent Heeringa

- Helped to develop a secure storage system for sensitive information using memorable images
- Built experimental versions of the application that were used during a series of research trials

Selected Projects

Procedurally Generated Landscapes

Fall 2016

Computational Graphics Midterm Project supervised by Professor Morgan McGuire

- Designed a set of procedural rules to create and render stylized low-polygon terrain
- Combined Perlin noise (terrain), Delaunay triangulation (mesh-simplification), and Voronoi diagrams (coloring) to generate unique, consistent, and explorable worlds

Rendering and Simulation of Water

Fall 2016

Computational Graphics Final Project supervised by Professor Morgan McGuire

- Integrated Nvidia's Flex PBD particle simulation library into the G3D framework to simulate and render realistic visual representations of water
- Implemented Marching Cubes algorithm for nearly real-time mesh generation of particles
- Accounted for Beer-Lambert coloring, caustics, refraction, and reflection effects at render time

Seam Carving

Fall 2014

Data Structures Final Project supervised by Professor Morgan McGuire

- Created application for image modification using Avidan and Shamir's seam carving algorithm
- Programmed a more memory efficient version of the algorithm able to run on Android phones

Teaching Experience

Teaching Assistant, Algorithm Design & Analysis, Williams College

Fall 2016

- Led weekly TA sessions and graded assignments

Tutor, Math and Science Resource Center, Williams College

Fall 2014 – Spring 2016

- Hosted bi-weekly meetings to review concepts from Cellular and Genetic Biology

Honors and Awards

Phi Beta Kappa Honor Society Member, Williams College

Fall 2017

- Elected after Junior year as a student in the top 5% by academic standing

Ward Prize, Williams College Computer Science Department

Spring 2017

- Awarded annually to the best project in computer science, for GANGogh

Relevant Coursework

Generative Adversarial Networks Independent Study • Machine Learning • Theory of Computation
Algorithm Design & Analysis • Computational Graphics • Algorithmic Game Theory • Computer Security
Agent Based Systems • Principles of Programming Languages • Computer Organization
Data Structures & Advanced Programming • Statistics • Linear Algebra • Discrete Math

Research Interests

Machine Learning • Deep Learning • Computer Vision • Robustness • Fairness • Interpretability
Reinforcement learning • Natural Language Processing • Multi-Agent Planning • Game Theory
Active Learning • Adversarial Learning • Generative Networks

Technical Skills

Python • C++ • PyTorch • NumPy • TensorFlow • Caffe2 • SQL • PHP • Java • JavaScript • HTML/CSS