

ANDREW PORT

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PROFILE

Mathematician (and currently a computer engineering student) with experience in computer vision. Seeking a rich environment to gain an expertise in deep learning. Left a PhD program in mathematics looking for something more applied, landed in the field of deep learning and computer vision. Love it. Currently working as a PhD student in the Computer Vision lab at UC Santa Cruz. Focused on deep learning.

RECENT WORK EXPERIENCE

Adjunct Professor of Mathematics and Statistics: Sacramento City College **Winter 2012-Present**
Taught various mathematics and statistics courses.

Mathematics Instructor: University of California, Davis **Summer 2007-Spring 2012**
Taught five full courses including: Vector Calculus, Linear Algebra, Differential Equations.

MathCAD Quality Assurance Intern: Parametric Technologies Co. **Summer 2005-Summer 2007**
Primary point of contact between engineers and beta testers of MathCAD 13, 14, and 14b.
Used tester reports to find, replicate, and log bugs using a multiple virtual machine environment.
Developed automated testing scripts for a newly integrated third-party symbolic computation engine.
Worked with third-party developers to resolve issues and limitations with their symbolic computation engine.

TECHNICAL SKILLS

Machine Learning: classification, clustering, fully-connected and convolutional neural networks, regularization, dropout
Statistical Methods: regression models, hypothesis testing and confidence intervals, singular value decomposition (SVD), dimensionality reduction

Time Series Analysis: time series analysis, multiple continuous time series alignment, dynamic time warping

Image Analysis: gradient-based edge detection, contour finding, image segmentation, thresholding, image processing,

Data Analysis and Signals Analysis: Fourier analysis, wavelet transforms, topological sorting, working w/ noisy data

Programming Languages: MATLAB, Python -- NumPy, SciPy, matplotlib, SageMath, OpenCV, scikit-learn, TensorFlow

My Usual Python Toolset: Sublime Text, IPython, pdb, Git, PyCharm, cProfile, Jupyter Notebook

Virtualization and Cloud Computing: VMWare, VirtualBox, Docker, Amazon AWS

OS, Office, and LaTeX: Linux, Mac OS X, Unix, Windows, Microsoft Excel, Microsoft PowerPoint, LaTeX

Select Coursework: Differential Geometry, Fourier Analysis, Discrete Optimization, Analysis, Functional Analysis, Numerical Linear Algebra, Linear Algebra, Tensor Algebra, Tensor Calculus, topology, Graph Theory, Probability, Statistics

EDUCATION

University of California, Santa Cruz **Fall 2017-Present**
(In progress) PhD in Computer Engineering

University of California, Davis **Fall 2007-Fall 2012**
Master of Science in Applied Mathematics

Worcester Polytechnic Institute **Fall 2003-Spring 2007**
Bachelor of Science in Mathematics, *High Distinction*

Northfield Mount Hermon School **Fall 2001-Spring 2003**
High School Diploma

SELECT INDEPENDENT PROJECTS

Current Work - [deep learning project to be added here]

svgpathtools - Created a robust (now somewhat popular) library of object-oriented tools for manipulating SVG Path objects and Bezier curves in Python (over 1900 pip installs according to vanity) -- <https://pypi.python.org/pypi/svgpathtools>

Python/OpenCV Rectangle Tracker - Developed a proof-of-concept prototype that tracks a piece of paper while it's being written on in real-time. Uses contour finding, thresholding, morphological operations, subpixel corner refinement, convex hull approximations, and homography transformations -- <https://github.com/mathandy/python-opencv-rectangle-tracker>