

Patrick N. Yu

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EDUCATION *Bachelor of Arts, Applied Mathematics*
Concentration: Computer Science
University of California, Berkeley
Expected: May 2015

COMPUTER SKILLS *Languages & Software:* Python, Java, Matlab, Scheme, Latex, R, Ruby, Git, SQL
Operating Systems: Windows, Mac, Unix

MAJOR CLASSES

• Multivariable Calculus	• Numerical Analysis
• Linear Algebra	• Complex Analysis
• Differential Equations	• Structure of Computer Programs
• Discrete Mathematics	• Data Structures
• Real Analysis	• Efficient Algorithms
• Abstract Algebra	• Probability and Random Processes
• Cryptography	• Computing with Data

EXPERIENCE *Social Coordinator, Treasurer, Head Coordinator* 2013 - 2015
Project S.M.I.L.E.
• Board member for Project S.M.I.L.E. and held a variety of positions.
• Worked closely with the ASUC, LEAD Center, and Public Service Center, handling a variety of aspects of the club.

Seminar Organizer, Education 97/197 2013 - 2015
University of California, Berkeley
• Organized a seminar which brought in speakers for different topics in education.

PROJECTS

Image Recognition

- Designed and implemented machine learning algorithms to identify written numbers in images.

Spam Filter

- Designed and implemented algorithms to create a spam filter for email data.

Image compression

- Implemented singular value decomposition processes to create a percentage based image compression program to decrease the storage size for the image.

Heat Maps

- Executed Crank-Nicolson finite difference method to solve the heat equation and track smells moving across a room.

PageRank

- Designed ranking system using a version of the PageRank algorithm that ranked actors using IMDb ratings through the Beautiful Soup Python package.