

Jessica Su
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Education

- **California Institute of Technology** Pasadena, CA
Senior, Computer Science (3.8 GPA) *September 2007 - present*

Skills

- **Computer skills:** Python, Unix, C++, Java, Perl, MySQL, MATLAB, Mathematica
- **Computer science classes:** Algorithms, machine learning, neural computation, databases

Work Experience

- **Protabit LLC** *Consultant, Summer 2012*
 - Used Python and a variety of bioinformatics tools to analyze the efficacy of protein design software.
- **Caltech Department of Mathematics** *Summer Undergraduate Research Fellow, Summer 2011*
 - Proved that Tutte polynomials do not satisfy the Kontsevich conjecture.
 - Implemented algorithms in Python, Maple, and FERMAT.
- **MIT Department of Brain and Cognitive Sciences** *Intern, Summer 2010*
 - Ran computer-based experiments to explore how people learn new words.
 - Used Python to build the experiment website and interface it with Amazon Mechanical Turk.
- **FAU Department of Complex Systems** *Intern, Winter 2010*
 - Modeled therapist-client interactions by solving nonlinear differential equations.
- **Caltech Department of Biology** *Intern, Summer 2006*
 - Used C to stochastically model how fast selfish genes spread into a population.
 - The model led to three publications and changed the research focus of the lab.

Projects

- **Netflix challenge** *Fall 2012*
 - Predicted movie ratings from training data. Ranked 14th in class competition.
 - Used C++, the k-nearest neighbors algorithm, and a variant of singular value decomposition.
- **Scrabble!** *Summer 2011*
 - Wrote a curses-based Scrabble clone in Python.

Publications

- **6 journal articles:** three in biology, two in mathematical psychology, one in mathematical physics. One paper published in *Science*. **2 presentations**, both in mathematical psychology.

Awards

- Top 500 Putnam (2008)
- Lingle Scholarship (2007, awarded to top two freshmen in incoming class)
- Axline Scholarship (2007, full ride merit scholarship)