

# JOHN LOUIE

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## EDUCATION

**Stanford University**, Stanford, CA

9/2012 – Present

- Expected Graduation Date: June 2016 with Bachelor of Science in Computer Science
- Relevant Courses:
  - CS107 (Computer Organization and Systems)
  - CS103 (Mathematical Foundations of Computing) and CS109 (Intro to Probability for Computer Scientists)
  - CS161 (Design and Analysis of Algorithms) and CS262 (Computational Genomics)
  - CME 100 (Vector Calculus) and CME 102 (Ordinary Differential Equations)
  - Human Biology Core
- GPA: 3.51/4.0

## TECHNICAL SKILLS & PROJECTS

- Experienced in Java, Python, C++, C and programming in the Unix environment
- Proficient in HTML/CSS, Javascript, jQuery, MATLAB
- Re-implemented malloc, realloc & free in custom heap (memory) allocator
- Prototyped a Python program for Variant Call Format and BED file comparisons, analysis and annotations

## EXPERIENCE

**CS106 Section Leader, Stanford University**, Stanford, CA

1/2015 – Present

- Teach a discussion section of 12 students for the CS106 introductory courses and hold regular office hours
- Topics covered: programming fundamentals, style and code commenting basics, data structures, object-oriented programming paradigms, Java and C++
- Grade student assignments and exams, and hold interactive grading sessions to review finished work

**Undergraduate Researcher, Stanford University School of Medicine**, Stanford, CA

6/2014 – Present

- Received the Stanford Bio-X Undergraduate Research Grant to work in Dr. Euan Ashley's Lab, which focuses on applying whole genome and exome sequencing data to personalize clinical care and medicine
- Compared and annotated current genomic insertion and deletion variant detection methods from Next Generation Sequencing data in order to optimize future discovery methods
- Gained extensive experience using bioinformatics tools: bedtools and bcftools

**Math & Science Tutor (Self-employed)**, Davis, CA & Stanford, CA

9/2009 – Present

- Guide students through problems in Chemistry, Biology and Mathematics (Algebra to Calculus)
- Create teaching activities and lesson plans for each student
- Learn various problem solving skills and adapt to each student's needs

**Studio Operator, Stanford Center for Professional Development**, Stanford, CA

9/2013 – Present

- Learned technical & aesthetic videography skills required for high quality recordings of educational lectures
- Understand complex hardware equipment usage: video cameras, switchboards, recording & mixing equipment

**Founder, UCDCM Wii-hab**, Sacramento, CA

5/2011 – Present

- Proposed the idea of using Wii gaming consoles to help physically deconditioned patients suffering from chronic obstructive lung disease regain cardiovascular and respiratory strength
- Coordinated logistics of program, including the reservation of a room to keep Wii-hab resources for patients
- Monitor program while at Stanford, and advocate for safe and appropriate protocols for proper Wii use