

# Adam Li

## Permanent Address:

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## EDUCATION:

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### UNIVERSITY OF CALIFORNIA, SAN DIEGO

**Bachelor of Science: Bioengineering**

**Bachelor of Science: Mathematics-Applied Science**

Major GPA:3.72/4.0 GPA

Expected March 2015

### YALE SCHOOL OF MANAGEMENT

**Global Pre-MBA Leadership Program: Selective Leadership Program (~5% acceptance rate)**

2014

Placed 3<sup>rd</sup> in Audubon Business Concept Pitch Plan, and 2<sup>nd</sup> in Audience Choice Award

## COURSEWORK:

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|--|--|--|----------------------------|
| • Mammalian Physiology                 | • Continuum Mechanics                        | • Matlab & SolidWorks Design                             | • Mass Transfer            |
| • Bioinstrumentation                   | • Biomechanics                               | • Fluid Mechanics  | • Thermodynamics           |
| • Linear Circuits                      | • Applied Linear Algebra                     | • Biomedical Imaging                                     | • Statics & Dynamics       |
| • Computational Methods in Engineering | • Independent Research in Tissue Engineering | • Mathematical Statistics & Probability                  | • Advanced Data Structures |
| • Engineering Graphics & Design        | • Biomaterials Engineering                   | • Experimental Techniques in Circuitry and Heat Transfer | • Biosystems and Control   |

## RESEARCH EXPERIENCE:

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### NEURAL INTERACTION LAB : ANALYSIS OF PARKINSON'S DISEASE

Sept 2013 – Present

*Senior Engineer/Researcher under Dr. Coleman and Dr. Litvan*

La Jolla, CA

- Researching and developing novel ways to evaluate Parkinson's Disease using gait and 3D spatiotemporal data in collaboration with UCSD Jacobs School of Engineering and School of Medicine.
- Co-founded a project to develop a Parkinson's disease tracking software product using C++, C#, Matlab to create data acquisition and analysis algorithms using Microsoft Kinect
- Wrote a successful Health and Life Sciences grant for \$10,000 and an IRB for carrying out pilot clinical study, as well as received the Gordon Fellowship Award for outstanding engineering leadership
- Leading a startup team of five to analyze potential business models and create presentations that outline customer interviews, potential IP strategy and value proposition through the NSF I-Corps Program
- Co-founder of startup concept with a potential market of ~\$20B; was later accepted into the Von Liebig National Science Foundation I-Corps as well as the NCIIA E-Team Program (~15% acceptance rate)

Adam Li,1

- Mentoring a senior Bioengineering team within the Bioengineering design course to address engineering challenges in monitoring and analyzing Parkinson's (plan on developing plan to incorporate neck EMG)

## **ENGINEERING WORLD HEALTH**

09/2012 – Present

*Project Team Leader for PCR under Dr. David M Smith*

La Jolla, CA

- Collaborate with UCSD School of Medicine and a clinic in Mozambique to develop a rapid, cost-effective diagnostic device for detecting drug resistance in HIV patient, which culminated in 2<sup>nd</sup> place for the EWH National Design Competition
- Led a team of 5 for the product development of a PCR, from an Arduino microcontroller with PWM current delivery using a PID algorithm for temperature control (programmed in C)
- Advising a team of 10 in product development, while managing a budget of over \$10,000. Responsible for setting the product strategy that resulted in a successful prototype that has a 95% cost-savings

## **QUALCOMM INSTITUTE**

06/2012 – 09/2012

*Summer Research Scholar under Calit2*

La Jolla, CA

- Was accepted to be a part of a 30 person cohort in order to conduct ~40+ hrs/week of independent research for the purpose of improving quality of life using emerging technologies and analytics
- Conducted experiments using a LabView programmed mechanical actuator to compress agarose hydrogels with embedded radiopaque particles, while imaging with 3D microCT; this tested initial feasibility
- Developed an Excel analysis method with 90% accuracy to measure tissue biomechanics and statistical variance using quantitative statistical analysis, which resulted in streamlined data analysis

## **CARTILAGE TISSUE ENGINEERING LABORATORY**

09/2011 – 06/2013

*Undergraduate Researcher under Dr. Robert L Sah*

La Jolla, CA

- Conducted pilot studies in tissue engineering with micro computed tomography to test hypotheses in orthopedic healthcare, using literature research and image data analysis to drive conclusions
- Created standard operating procedures for inventory processing, laboratory operations, sample preparation, data mining methods and data analysis of CT images that reduced training time
- Analyzed images using Excel, Matlab, DataViewer and CT Analyzer and then documented experimental results through scientific reports, and translate literature findings to research proposals
- Contributed to a large human cartilage research project by scanning ~20 samples over the course of an entire weekend for ~72 hrs

## **INDUSTRY EXPERIENCE:**

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### **GENENTECH INC.**

July 2013 – Sept 2013

*Process Development Engineering Intern under Domenic Schmizzi*

San Francisco, CA

- Implemented a new batch control process using Rockwell Automation and PLCs to replace data server management, which results in reducing the purification plant's down-time and poor system performance
- Developed program design iterations to incorporate SMART goals, object-oriented programming, modular control architecture, and HMI system for running purification processes (used SFC, SQL, Structured Text)

### **RAINBOW TRANSGENIC FLIES INC.**

July 2011 – Sept 2011

*Lab Assistant Intern under Ms. Hong Yu*

Camarillo, CA

- Used a modified QIA filter plasmid Midi Kit, performed ethanol DNA precipitation using spectrophotometry for quality assurance; performed cell culture of E.Coli
- Elute pure DNA using affinity chromatography for DNA microinjections into larvae; set up genetic crosses, screens of transgenic flies, and performed DNA microinjections into larvae using Standard Electron Microscope

## ADDITIONAL EXPERIENCE:

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### RGB Capital LLC.

Feb 2013 – May 2014

*Investment Management Intern*

La Jolla, CA

- Assisted the CEO in building excel models for a \$50M fund, focused on managing and minimizing day-to-day volatility for clients
- Created and optimized ETF and Mutual fund screeners using Visual Basic to program macros that automate screening process

### UCSD STUDENT FOUNDATION INVESTMENT COMMITTEE

Sept 2013 – Present

*Associate and CFA Support Researcher*

La Jolla, CA

- Generating buy-side equity research reports for \$450,000 student endowment fund, producing yearly return rates of ~6%
- Effectively analyzed companies with a bottom-up approach, using discounted cash flow, company comparable, and precedent transaction analysis

### ALPHA KAPPA PSI

04/2012 – Present

*President and Director of Consulting under Professor Delbert Foit Jr.*

La Jolla, CA

- Leading investment committee that prepares and presents equity researches to make investments for ~\$30,000 fund, using financial modeling (Excel), SWOT, and Porter's Five Forces; also analyze interest rates, and emerging markets
- Led the strategic vision and daily operations for a team of 15 over 6 weeks to raise \$5,000; also completed a market research project on Facebook Inc. and 100K business plan proposal for a social media startup
- Spearheaded a team of four to compete in the PBLI Case Competition of 2013, where the company strategy, financials of mobile advertising, and operational risks of Facebook Inc. were analyzed

### INTERNATIONAL SOCIETY FOR PHARMACEUTICAL ENGINEERING

09/2011 – Present

*Vice President External under Professor Melissa Micou*

San Diego, CA

- Set the strategy and operational goals with a team of 25, while maintaining an ~\$5,000 budget; won Chapter of the Year against all national chapters for two consecutive years
- Led a series of 12 workshops for leadership development and implemented a mentorship program for students to connect with over 30 industry professionals, which was emulated by the national chapter of ISPE's program
- Managed the Leadership Rotational team of 10 students in the operations of various company info sessions and tours that drew in over 240 students for biotech companies including: Genentech, Life Technologies, Baxter, and Illumina

## HONORS/AWARDS:

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**NCIIA E-Team Program** – National selective program (~15% acceptance rate) for funding

06/2014

**UCSD Sixth College Leadership Award** – Finalist For Outstanding Leadership

05/2014

**ASAIIO** – Student Design Competition Top 27 In Nation

05/2014

**Tau Beta Pi** – Engineering honor society

2014

**Gordon Fellow** – Engineering leadership excellence award

2014

**Von Liebig NSF I-Corps Fellow** – Competitive startup program for NSF seed funding

2013

**Gordon Leadership Scholar** – Competitive leadership program

2013

**California Institute of Technology** – Competitive Summer Research Grant

2012

**Provosts Honors** – Obtaining a term GPA greater than 3.5

2011-2014

**National AP Scholar** – Obtained 4, or higher on 12 AP tests

2010

## **PRESENTATIONS/CONFERENCES:**

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<b>NSF Center for Science of Information</b>	08/2014
<b>Yale SOM Audubon Business Concept Pitch</b>	06/2014
• <i>Project:</i> GreenHaven 501© Non-Profit Business Pitch	
<b>Bioengineering Day Poster Presentation</b>	04/2014
• <i>Project:</i> The Gait Analysis of Parkinson's Disease	
<b>Von Liebig NSF I-Corps Phase I Pitch</b>	03/2013
• <i>Project:</i> BioMetrics Analytics	
<b>ISPE Poster Presentation</b>	06/2013
• <i>Project:</i> Feasibility of 3D Deformation and Strain Analyses by Micro-Computed Tomography	
<b>Qualcomm Institute Summer Research Scholar Poster Presentation</b>	09/2012
• <i>Project:</i> Feasibility of 3D Deformation and Strain Analyses by Micro-Computed Tomography	

## **ADDITIONAL SKILLS:**

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### **CERTIFICATIONS:**

- Research Aspects of HIPAA - (06/30/2014)
- Collaborative Institutional Training Initiative (CITI) Biomedical Research - (06/30/2014)

### **LABORATORY:**

- Knowledgeable about HPLC, Microfluidics, Ethanol Precipitation, Buffer/Reagent Preparation, AFM, Optical Microscopy, Hydrogel Polymerization

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|-----------------------|--------------------|----------------------|-----------------------|
| • PCR                 | • SEM              | • Rainin Pipettes    | • Clean Room          |
| • Computed Tomography | • Laser Microscopy | • Mechanical Testing | • Tissue/Cell Culture |

### **SOFTWARE/OTHER:**

- Knowledgeable about Object-Oriented Programming, Entrepreneurship, Project Management in Agile and Iterative, IP Strategy, Market Research, Financial Modeling, Equity Research
- Proficient with MS Word, PowerPoint and Excel; Web Design and Data Analysis
- Skilled in C, C++, Python, Java, JavaScript, SQL, HTML, R, MATLAB, LabView, Finite Element Analysis/Modeling, SolidWorks, MS Visual Studio, Structured Text, SFC
- Fluent in English and Chinese