

# SHAWN T. SCHWARTZ

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## SUMMARY

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A well-rounded undergraduate student and public speaker with 9+ years of programming, design, and full-stack development experience, in over 10 programming languages. My research interests include memory differences and deficits in younger adults as well as in the development of innovative teaching technologies to enhance the 21st century classroom education experience.

## EDUCATION

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**University of California, Los Angeles (UCLA)**, Los Angeles, CA      Sept. 2015 – Exp. June 2019  
*Bachelor of Science (B.S.), Cognitive Science, Specialization in Computing, Expected June 2019*  
Highest Departmental Honors and Thesis, *Candidate*  
Thesis: *Risks and rewards: memory for positive and negative item-location associations.*  
Primary Advisor: Dr. Alan D. Castel  
*Bachelor of Science (B.S.), Biology, Expected June 2019*  
Departmental Honors and Thesis, *Candidate*  
Thesis: *Machine learning applications for classifying biodiversity of color-patterns in coral reef fishes.*  
Primary Advisor: Dr. Michael Alfaro

## PUBLICATIONS

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- [1] Dang, J., Lin, B., Yuan, J., **Schwartz, S. T.**, Shah, R. M., & Garg, N. K. (2018). Smart access to 3D structures. *Nature Reviews Chemistry* 2, 95 – 96. [View PDF](#)
- [2] **Schwartz, S. T.**, Siegel, A. L. M., & Castel, A. D. (2019). *Risks and rewards: memory for positive and negative item-location associations.* Manuscript in preparation.

## RESEARCH EXPERIENCE

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**The Alfaro Lab**, UCLA, Los Angeles, CA      September 2018 – Present  
*Undergraduate Thesis Student & Research Assistant*  
Principal Investigator: Dr. Michael Alfaro

- My current research with Liz Karan, under Michael Alfaro, Ph.D., focusses on designing novel machine learning image processing algorithms to classifying the biodiversity of color-patterns in coral reef fishes.
- Evolutionary Biology Research Interests: Computational and Comparative Phylogenetic Analyses, Biological Statistical Modeling, Species Biodiversity Classification

**Memory and Lifespan Cognition Lab**, UCLA, Los Angeles, CA      March 2018 – Present  
*Undergraduate Thesis Student & Research Assistant*  
Principal Investigator: Dr. Alan D. Castel

- My current research with Alexander L.M. Siegel, M.A., under Alan Castel, Ph.D., focusses on establishing differences in the relationships between an item's value and its spatial location to investigate participants' strategies in visuospatial memory recall with risk-reward motivation.
- Other projects include the investigation of priming and interference in everyday memory and attention.
- Cognitive Research Interests: Metacognition, Aging, Metamemory, Risk-Reward, Visuospatial Memory

**NASA Jet Propulsion Laboratory (JPL)**, Pasadena, CA  
*High School Computational Chemistry Researcher*

October 2013 – March 2014

- Developer of Software: “*Computational Simulation of Multidimensional H<sub>2</sub>O Molecule Interactions*” (*Java + MATLAB*) under the mentorship of Dr. William N. Warner.
- First rendition of software won 1st place at L.A. County Science Fair, March 2013.
- Competed for invitation to Intel International Science and Engineering Fair at the California State Science Fair, April 2013.

## TECHNICAL & LABORATORY SKILLS

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- **Programming**  
Fluent in Java, C++, Python, MATLAB, R, PHP, HTML5, CSS3, JavaScript  
Proficient in Swift, MySQL, Ruby, JSON, jQuery, AngularJS, Node.js  
Statistical Packages: tidy, colordistance, dplyr, pavo, magick  
Other Libraries & Tools: jsPsych, Collector, Psychtoolbox, Jekyll, Jmol, JSmol, p5.js  
Machine Learning: TensorFlow, Keras
- **Applications**  
Bash, Git, L<sup>A</sup>T<sub>E</sub>X, SPSS Statistics, Microsoft Excel, Sublime Text, R-Studio, Xcode, Jupyter Notebook  
Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe Lightroom, Adobe XD CC
- **Operating Systems**  
MacOS, Windows, Linux, iOS, Android
- **Statistical**  
Analysis of variance, correlation, chi-square, regression, hierarchical linear modeling (HLM)
- **Laboratory**  
Titrations, Micropipetting, Gel Electrophoresis  
Mass Spectrometry, IR, H,C–NMR Analysis  
Functional Neuroimaging (fMRI) & FMRIB Software Library (FSL)

## TECHNICAL EXPERIENCE

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### Associated Students UCLA (ASUCLA)

Los Angeles, CA

*Lead Student Full-Stack Web Developer / Technical Assistant*

January 2016 – Present

- Redesigned entire ASUCLA institutional website & implemented backend for Board Members to access and edit site content. Site reaches over 500,000+ unique views annually. <http://asucla.ucla.edu>
- Assisted in designing layout & developed backend JavaScript solutions for responsive headers for the new UCLA Store website. <http://uclastore.com>
- Developed a JavaScript kiosk program to run historical timeline of UCLA in UCLA Ackerman Union Level 1.
- Designed & programmed interactive JSON ASUCLA Store Reward Points checker & PHP-based menus for campus restaurants.
- Design, code, and send out weekly mass email promotions for 12 UCLA campus stores (*1,000,000+ emails delivered per year*).

### UCLA Health, Faculty Practice Group (FPG)

Los Angeles, CA

*Population Health Care Coordinator Intern*

June 2017 – September 2018

- Invented, developed & maintained novel web-software for UCLA Health Hospice & Palliative Care Departments: *myEMRA*<sup>®</sup>: “*my Electronic Matching Resource Assistant*”. <https://myemra.com>  
\*Adoption & Pilot by UCLA Health System & ISS for proxied network integration currently in progress\*
- Outreached to patients via telephone encounters to obtain missing medical procedure records.

- Maintained innovative Excel Database from UCLA patients' charts ("CareConnect") & 9 local hospice agencies to track & drew new statistical conclusions regarding UCLA hospice referrals to external agencies.
- **Total Volunteered Hours: 451 hours.**

### QR Chemistry

Software Development Consultant & Application Designer

Los Angeles, CA

January 2018 – July 2018

- Part of the development & execution team of an Apache Cordova wrapped application that provides smart access to 3D molecular structures for enhancing organic chemistry education in the classroom.  
<https://qrchem.net>
- Developed with the guidance & support of Dr. Neil K. Garg & Dr. Daniel Caspi.  
Published in *Nature Reviews Chemistry*, [1] & Supporting Article in *The Daily Bruin*.

### Kidz Dental Care

Designer & Web Developer

Porter Ranch, CA

July 2017 – June 2018

- Designed, built, and currently maintains (per diem) pediatric dental responsive websites.  
<https://kidzdentalcare.com> & <https://kidzdentalcare661.com>
- Created HIPAA compliant secure patient information (PHP) form that generates secured PDF information form to streamline patient-doctor experience and reduce wait-times.

### LanguageBird®, LLC

Lead Full-Stack Developer & Programmer

Los Angeles, CA

July 2016 – March 2018

- Developed and managed dynamic user experience for WASC accredited online school providing University of California and NCAA approved online 1:1 foreign language courses and credit to over 1000 high school students, worldwide. <https://languagebird.com>

## VOLUNTEER EXPERIENCE

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### UCLA Health

Care Extender Internship, Department Coordinator Assistant (DCA)

Santa Monica, CA

February 2017 – Present

- Shadow out-patient surgeons and radiology technicians for in-patient and emergency department cases, and check-in patients for early-morning surgeries in admissions.
- *Department Coordinator Assistant*: Audit fellow Care Extender Volunteers throughout their assigned departments to maintain the quality and integrity of the Care Extender Internship Program.
- **Total Volunteered Hours: 783 hours.**

### UCLA Center for Accessible Education (CAE)

Volunteer Notetaker

Los Angeles, CA

January 2017 – Present

Provided quality, detailed notes for students with registered disabilities, for the following courses:

- Psychology 20: Introduction to MATLAB Programming (Winter 2017)
- Psychology 100B: Research Methods in Psychology (Fall 2017)
- Psychology 124C: Human Memory (Winter 2018)
- Ecology and Evolutionary Biology 186: Evolutionary Medicine (Summer 2018)

## LEADERSHIP EXPERIENCE

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### Back Off Bully Organization

Co-Founder & Web Developer

Chatsworth, CA

March 2014 – Present

Back Off Bully is an organization that is working to end the bullying epidemic and give self-confidence to those affected by it.

- Built an international network, in over four countries, of thousands of children and adults through website outreach and social media campaigns.

- Established connection and relationship, through outreach, with our organization's Main Sponsor: **Nancy Cartwright** (Voice of Bart Simpson from *The Simpsons*). <https://backoffbully.org>

## AWARDS & PROFESSIONAL MEMBERSHIPS

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### Awards:

- Highest Departmental Thesis Honors in Psychology, *UCLA*, Exp. June 2019
- Departmental Thesis Honors in Ecology and Evolutionary Biology, *UCLA*, Exp. June 2019
- Distinguished Care Extender of the Rotation, *UCLA Health, Santa Monica Hospital Surgery Center*, Summer 2018
- Distinguished Community Service Award & Rank 1/81 Valedictorian, *High Tech Los Angeles High School*, June 2015
- Certificate of Congressional Recognition for outstanding community contribution to end the bullying epidemic and provide self-confidence for those affected by it, *City of L.A. 8<sup>th</sup> 12th Council District*, July 2014

### Professional Memberships:

- American Psychological Association (APA), *Undergraduate Student Affiliate, Member: American Psychological Association of Graduate Students (APAGS)*
- Association for Psychological Science (APS), *Undergraduate Student Affiliate*