

# SEBASTIAN C. WAZ

951.741.8079  
swaz@uci.edu

sebwarz.com

7422 Palo Verde Road  
Irvine, CA 92617

---

## EDUCATION

### University of California, Los Angeles

B.S. in Cognitive Science and Computing (Class of 2016)

Coursework: generalized linear models, Bayesian data analysis, signal detection theory, neural networks, AI playing games, automata theory, software construction, operating systems design, computer architecture

## SKILLS

- Python
- NumPy
- Keras
- scikit-learn
- NLTK
- R and Rmd
- R2jags
- SPSS
- MATLAB
- C/C++

## WORK HISTORY

### *GIS Analyst*, Easter Island Statue Project (July 2016 – September 2017)

- Wrote Python modules for handling ETL and geospatial analysis (e.g. least-cost pathing, clustering) in ArcGIS
- Audited and updated MySQL database of archaeological records (image and text) spanning 4000+ sites
- Used Natural Language Toolkit (NLTK) to identify mentions to objects of interest in historical field notes

### *Project Manager*, UCLA Unmanned Aerial Systems (July 2014 – July 2015)

- Secured \$10,000 grant from Northrop Grumman Corporation for student project in computer vision and avionics
- Exercised risk management: developed contingency plans to mitigate harm and maximize system survivability
- Grew club membership by 500%; team competed in the 2015 Student Unmanned Aerial Systems Competition

## PROJECTS

### *Distilling play strategies from NN agents*, CS 188: AI Playing Games (Spring 2016)

- Used unsupervised learning (JavaML) to cluster 100,000+ game-states from AI agent runs of Super Mario
- Wrote a tailored Q-learning algorithm to reduce neural network (NN) behavior to state-action strategies
- Q-learning agent retained basic behaviors of NN supervisor, represented behaviors in human-readable format

### *Unsupervised learning of musical genres*, Psych 186C: Neural Networks (Winter 2016)

- Scripted backpropagation NN and Kohonen self-organizing map (SOM) algorithms in MATLAB
- Used LabROSA Million Song Database to generate time-series features for 10,000 song dataset
- Successfully automated genre clustering (78% purity, 4 genres) and classification (80% accuracy, 4 genres)

### *Personal projects*

- Generating hip hop beats procedurally in Python (Pyo) using Bayesian and neural network models
- Wrote, produced, and marketed *Analogies*, an independent music record (see: [analogies.thatsebas.com](http://analogies.thatsebas.com))

## RESEARCH

### *Graduate Student*, Chubb-Wright Lab, UC Irvine (Fall 2017 – present)

- Developed neural fields model for the computation of pre-attentive visual statistics (manuscript in preparation)

### *Independent Researcher*, Zili Liu Computational Perception Lab, UCLA (Summer 2014 – present)

- Applied signal detection theory to research in visual perception:

Song, X., Waz, S. C., & Liu, Z. (2015, May). *Boundary Extension: Insights from Signal Detection Theory*. Poster presented at the 24<sup>th</sup> Annual Psychology Undergraduate Research Conference (PURC) at UCLA, Los Angeles, CA.

- Awarded \$2,000 research scholarship by the Psychology Research Opportunities Program (PROPS)

June 25, 2017

# Sebastian Waz

has successfully completed a free online offering of

## Automata Theory

with **Distinction**.

This course covers the theory of automata and languages, including the various forms of finite automata, regular expressions, context-free grammars, Turing machines, undecidability, and NP-completeness. The Statement of Accomplishment with Distinction is awarded to those scoring at least 85% of the marks, half of which are based on homeworks and half on a timed final exam.

  
**Jeffrey D. Ullman**  
S. W. Ascherman Professor of Engineering  
(emeritus)  
**Stanford University**

**PLEASE NOTE:** SOME ONLINE COURSES MAY DRAW ON MATERIAL FROM COURSES TAUGHT ON-CAMPUS BUT THEY ARE NOT EQUIVALENT TO ON-CAMPUS COURSES. THIS STATEMENT DOES NOT AFFIRM THAT THIS PARTICIPANT WAS ENROLLED AS A STUDENT AT STANFORD UNIVERSITY IN ANY WAY. IT DOES NOT CONFER A STANFORD UNIVERSITY GRADE, COURSE CREDIT OR DEGREE, AND IT DOES NOT VERIFY THE IDENTITY OF THE PARTICIPANT.

Authenticity can be verified at <https://verify.lagunita.stanford.edu/SOA/ceca4783f348447589f9adf3b7fcb2c1>



# Sebastian Waz

has successfully completed the training requirements to be recognized as an

Adobe Certified Associate

Visual Communication using Adobe Photoshop® CS4

Completed on May 1, 2012

Shantanu Narayen  
President and Chief Executive Officer  
Adobe

HWPPh-kdAJ  
  
[verify.certipoint.com](http://verify.certipoint.com)

 CERTIFIED ASSOCIATE



SAVE A LIFE

**AMERICAN COLLEGE OF SURGEONS  
COMMITTEE ON TRAUMA**

Recognizes

**Sebastian Waz**

For successful completion of the  
**Bleeding Control Basic v. 1.0 Course**

Presented on January 20, 2018, by

**Anteater Emergency Medical Services & UCI Trauma Center**

Copyright © 2017 by the American College of Surgeons



THE  
**COMMITTEE  
ON TRAUMA**



100+ years

AMERICAN COLLEGE OF SURGEONS

*Inspiring Quality  
Highest Standards. Better Outcomes.*