AARON GOKASLAN

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EDUCATION

Brown University Providence, RI

MSc. Computer Science (2019)

BSc. Computer Science (2018) **with Honors**. GPA: 3.8 **Sigma Xi | Senior Prize**

PUBLICATIONS

Improving Shape Deformation in Unsupervised Image-to-image Translation ECCV

Aaron Gokaslan, Vivek Ramanujan, Daniel Ritchie, Kwang In Kim, James Tompkin *2018*

- https://arxiv.org/abs/1808.04325
- Extended cyclic loss based generative adversarial networks to shape deformation, hyperdeformed style transfer, and object transfiguration.

The Eye of the Typer: A Benchmark and Analysis of Gaze Behavior during Typing ETRA

Alexandra Papoutsaki, Aaron Gokaslan, James Tompkin, Yuze He, Jeff Huang *2018*

- http://delivery.acm.org/10.1145/3210000/3204552/a16-papoutsaki.pdf
- Recorded, processed, and analyzed a dataset from a large user study to quantify the improvement of WebGazer when using keystrokes as additional training data | WebGazer Website: https://webgazer.cs.brown.edu/.

The Butterfly Effect on Glioblastoma: Is Volumetric Extent of Resection More Effective than Biopsy for these Tumors Journal of Neurencology

Chaichana et al. *2014*

- https://www.ncbi.nlm.nih.gov/pubmed/25193022
- Performed analysis of patient outcomes of brain cancer supporting the effectiveness of surgical intervention.

Spinal Cord: Anatomical Overview and Selected Pathologies eLS

Stewart et al. *2014*

- http://www.els.net/WileyCDA/ElsArticle/refId-a0021402.html
- Conducted a literature review of research concerning the human spinal cord.

Lumbar Fusion versus Non-operative Management for Treatment of Discogenic Low Back Pain Journal of Spinal Disorders and Techniques

Bydon et al. *2014*

- https://www.ncbi.nlm.nih.gov/pubmed/24346052
- Gathered data for metanalysis of previous studies from literature search.

RESEARCH EXPERIENCE

Computer Vision Research Group: with James Tompkin January 2017–Current

Brown University

- See **ECCV 2018** Publication.
- Submitted *Exploring the Spectrum of Mask Supervision for Unpaired Image-to-Image Translation* as co—first author in collaboration with researchers at Adobe Research and Uni. of Bath. Preprint soon to be on Arxiv.

Human Computer Interaction Lab: with Jeff Huang June 2016–September 2018

Brown University

- Contributed to WebGazer: A Javascript library that uses a browser's webcam, user feedback, and machine learning to determine where a user is looking on screen. Published results in **ACM ETRA 2018**.
- Optimized code and increased accuracy through features such as Kalman Filters.

Robotics Lab: with Michael Littman March 2017–Current
Brown University

· Working on interdisciplinary machine learning research projects in collaboration with the High Energy Physics and Planetary Science departments.

Humanity Centered Robotics Lab: with Ian Gonsher January 2016–May 2016
Brown University

· Designed a full—body telepresence robot that is controlled via a web browser using WebRTC, ROS, for telemetry.
· Focused mainly on programming the interface, server, and telemetry of the robot.
· Video Demo: `https://youtu.be/JOCcGLX_QwY`

Robert Wood's Microrobotics Lab June 2015–August 2015
Harvard University

· Designed and programmed software to simulate the physics of origami style laminated robots design in popupCAD.
· Wrote software to convert laser cuts into 3D model to automate import the import of the robot into the Gazebo robotic simulation environment.
· Project Page: `http://www.popupcad.org/` | Video Presentation: `https://youtu.be/PK1o2Lgkx4k`

Cancer Stem Cell Research Lab: with Alfredo Quinones March 2010–May 2014
Johns Hopkins University

· Contributed to three papers by using computational and physical methods to ascertain the effectiveness of cancer treatments including stem cell therapy and epigenetic analysis.

Center for Advanced Modeling: with Joshua Epstein June 2014–August 2014
John Hopkins University

· Worked on creating multiagent models of mechanisms such as disease outbreaks.

WORK EXPERIENCE

Facebook Summer 2017 / Summer 2018
Software Engineer Intern

· Used machine learning techniques to detect crowdturfing campaigns on pages.
· Developed software to help manage mapreduce and distributed software in the data warehouse.

Microsoft August 2015–August 2017
Student Partner

· Hosted developer talks, hackathons, and workshops relating to Microsoft products.

Vision Systems Inc May 2016–August 2016
Research Intern

· Programmed software that uses neural networks and more classical techniques, in addition to structure from motion depth estimations to automatically label, categorize, and correct road vectors in satellite imagery.

Teaching Assistant (Brown) 2016–2018

· Head Teaching Assistant: Computer Vision (Fall 2017), and Cybersecurity (Spring 2017).
· Teaching Assistant: Machine Learning (Spring 2018), Exec. Masters in Cybersecurity (Fall 2016), Engineering entrepreneurship (Spring 2016).

ACCOLADES

2nd Best Overall - Brown CS Undergrad Research Symposium May 2018

· Press Article: `https://goo.gl/v86SED`

Best Use of NASDAQ API: HackMIT Hackathon September 2015

· Awarded to team that best "use[d] Nasdaq market data to analyze, predict, and correlate events"
· The app converted n-dimensional arrays into sound waves using the properties of sound such as pitch, amplitude, volume and other characteristics in a VR environment.
· Presented the finished product to executives at NASDAQ in New York.
· Featured on a Times Square Billboard as a result. | Press Article: `https://goo.gl/vAuALY`

Finalist - Microsoft Build the Shield Cybersecurity Competition January 2016

· Press Article `https://goo.gl/VNU9Xk`

Best Microsoft Project Hack@Brown Hackathon February 2015

· `https://devpost.com/software/holoscreen`
· Programmed an application that allows the user to control a 3D avatar or augmented reality hologram for holographic conferencing.
· Focused on augmented reality projection of the holograms through a smartphone.

Best iOS Software Hack: HackPrinceton Hackathon November 2014

· Press Article: `https://goo.gl/CjDNBB`
· Designed app that functioned as a universal translator utilizing speech to text tech. with Google Glass.

2nd Best Software Hack: HackPrinceton Hackathon April 2015

· Press Article: `https://goo.gl/4CfxuA`
· Designed a website that converted files into Youtube videos to allow it to act as unlimited cloud storage.

4th Place - Social Engineering: UConn Cyberseed Cybersecurity Competition November 2015

· Press Article: `https://goo.gl/1nV4r5`

Finalist - Microsoft Build the Shield Cybersecurity Competition January 2016

· Press Article: `https://goo.gl/VNU9Xk`

EXTRACURRICULARS

Computer Science Department Undergraduate Group: President Sep. 2015–May 2018

· Coordinate events sponsored by the CS department inviting guest speakers, recruiters, and alumni to present.

Brown University Class Coordinating Board: Public Relations Officer Sep. 2014–Sep. 2015

· Managed event marketing, social media campaigns, and event logistics for student government.
· Organized record—breaking homecoming event attended by over 4,000 people.

Triple Helix International: Chief Technology Officer for Int. Team April 2015–May 2017

· Redesigned International website with collaborative file sharing features and aesthetic upgrades.
· Led local chapter's marketing and business ventures for the past few years.

SIDE PROJECTS

`Anime-planet.com`: Volunteer as a developer for one of top 10000 most visited sites in the world.
Open Source: Contribute to a variety of open source projects
JARVIS Speech API: a reversed engineered Google Speech API (lead author).
LVDOWin: An open source Windows port of the software I encode files as Youtube videos.
Tensorpack: A Tensorflow library. Currently working on implementing papers as examples.
Github: `https://github.com/Skylion007`
Challenge Post: `https://devpost.com/Skylion`

INTERESTS

Science fiction novels, video games, men's field hockey, rock climbing, programming, current events, court cases, anime, politics, computational modeling, and scientific research.