TYLER LABONTE

Los Angeles, CA | tlabonte@usc.edu | tmlabonte.github.io | medium.com/@tmlabonte | github.com/tmlabonte | (808) 597-0493

EDUCATION

University of Southern California, Viterbi School of Engineering **Los Angeles, CA**
Bachelor of Science, Computer Science **May 2021**
Minor in Statistics **GPA: 3.82**

- USC Trustee Scholarship (top 2% of USC Class of 2021)
- USC Viterbi Fellowship (top 6% of Viterbi Class of 2021)

SKILLS

Languages: Python, C++, Java, Javascript, HTML/CSS
Software: TensorFlow, Keras, Scikit-Learn, Linux CLI, Git, LaTeX

EXPERIENCE

USC Computer Science Theory Group **Los Angeles, CA**
Undergraduate Researcher **August 2018 - Current**

- Handpicked to take the Ph.D. caliber Advanced Algorithms course as a substitute for the undergraduate version.

Air Force Research Laboratory (AFRL) **Kihei, HI**
Deep Learning Intern **June 2018 - August 2018**

- Delivered a lightweight, RESTful remote inference library in TensorFlow-Serving for decoupling deep learning development and deployment, enabling model usage on classified networks, IoT devices, and production systems.
    - Offset $100,000 of machine learning engineer salary on Machine Intelligence for Space Superiority portfolio.
- Implemented a generative adversarial network (CycleGAN) in TensorFlow to impose organic deep-space noise profiles on anomalous priors, augmenting existing Faster R-CNN algorithm for astronomical anomaly detection.
- Briefed research results and implications to a dozen key Department of Defense leaders.

USC Integrated Media Systems Center (IMSC) **Los Angeles, CA**
Undergraduate Researcher **September 2017 - May 2018**

- Developed machine learning algorithms with Keras and Scikit to predict graft futility in liver transplantation patients.
    - Achieved an AUROC of 0.74 with deep neural network/random forest ensemble model.
- Reduced entries in "dirty dataset" by 93% through preprocessing and cleansing, resulting in 22,000 usable entries.

PROJECTS

Hyper-Pyramix AI **CAIS++: Center for Artificial Intelligence in Society**

- Developing a reinforcement learning algorithm to solve Pyramix in *n* dimensions. **September 2018 - Current**

PageRank Simulator **Final Project, CS104: Data Structures**

- Simulated a webpage dataset and implemented the PageRank algorithm in C++. **February 2018 - April 2018**
    - Developed a crawler to autonomously discover relevant webpages using depth-first search.

World's Stage **SB Hacks IV Hackathon, University of California Santa Barbara**
Ethical Hacking Finalist (top 20 out of 4500 projects from dozens of MLH hackathons) **January 2018**

- Implemented and integrated the YouTube API and Google Maps API with Javascript to build a dynamic website.
    - Enabled users to explore cultural differences in dance through access to undiscovered cover videos.

LEADERSHIP

USC Viterbi Adopt-a-School/Teacher (USC VAST) **Los Angeles, CA**
Associate Director of Robotics Outreach **January 2018 - Current**

- Led five USC volunteers and designed curriculum for robotics workshops, educating 30 teachers in basic coding.
- Coordinated local schools, USC labs, and student groups for annual Robotics Open House with 2,400 attendees.
- Delivered $66,000 budget to establish Sphero robotics programs at three inner-city elementary schools.

USC Viterbi STEM Educational Outreach **Los Angeles, CA**
Volunteer VEX Robotics Mentor **December 2017 - Current**

- Established and mentored a VEX Robotics team of four female minority students at an inner-city middle school.

USC Hawaii Club Executive Board **Los Angeles, CA**
Vice President of Finance **August 2018 - Current**

- Managed over $8,500 in club funds; coordinated payments between 60 members and three bank accounts.