TYLER LABONTE

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

EXPERIENCE

Air Force Maui Optical and Supercomputing Site (AMOS) **Kihei, HI**
Deep Learning Research Intern **June 2018 - August 2018**

- Used TensorFlow-Serving to develop a lightweight, RESTful remote inference library for decoupling deep learning development and deployment, enabling model usage on classified networks, IoT devices, and production systems.
    - Offset $150,000 of machine learning engineer salary time via project completion months ahead of schedule.
- Utilized TensorFlow to design a generative adversarial network (CycleGAN) to impose organic deep-space noise profiles on anomalous priors, augmenting existing Faster R-CNN algorithm for spatial anomaly detection.
- Communicated my research at two symposium talks to technical audiences of 50+.

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

- Used Keras and Scikit to develop machine learning algorithms 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.
- Applied F1/AUROC to evaluate models including neural networks, support vector machines, and random forests.
- Wrote and researched sections of conference paper (Stanford ML for Healthcare) and project/funding proposals.

PROJECTS

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

- Used C++ to simulate a webpage dataset and implement the PageRank algorithm. **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**

- Utilized JavaScript to implement and combine the YouTube API and Google Maps API.
    - Enabled users to explore cultural differences in dance through access to undiscovered cover videos.

Compute **October 2017 - November 2017**

- Used JavaScript to program an incremental game whose progression is governed by a series of exponential functions.
    - Devised a method to gather efficiency data from web app and export to a spreadsheet for analysis.

LEADERSHIP

USC Hawaii Club Executive Board **Los Angeles, CA**
Vice President of Finance **August 2018**
USC Viterbi Adopt-a-School/Teacher (USC VAST) **Los Angeles, CA**
Robotics Coordinator **January 2018 - Present**

- Initiated a $22,000 grant application to bring Sphero robotics to three inner-city elementary schools.
- Led five USC volunteers and designed curriculum for Sphero outreach session, educating 30 teachers in basic coding.
- Coordinated LA schools, USC laboratories, and student groups for annual Robotics Open House with 2,400 attendees.

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

- Established and mentored a middle school VEX Robotics team of four female minority students.
- Led growth of program to include a competitive team and training team, with three additional USC volunteers.