Hsuan-Hau Liu

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EDUCATION

University of Southern California | Los Angeles, CA   **Auburn University** | Auburn, AL
M.S. Computer Science - Intelligent Robotics   *B.S. Computer Science*
GPA: 3.57 | Exp. December 2019   Major GPA: 3.65 | December 2017

SKILLS

- **Programming Languages**: Proficient: Python, C++ / Familiar with: Java, C
- **Web Development**: HTML, CSS, JavaScript, Bootstrap
- **Tools**: Git, VIM, Jupyter Notebook, MS Visual Studio Code

WORK EXPERIENCE

Developer Intern at University of Southern California, CA, USA   Fall 2018
Directed Research CarmaCam Project
- Developing machine learning models to analyze videos for recognizing dangerous driving cars, assigning priorities to user reports, and enhancing the current web application.

Undergraduate Teaching Assistant at Auburn University, AL, USA   Fall 2017
Personal Computer Applications Course
- Prepared course material prior to each class and assisted lecturers monitoring exams.
- Guided students through finishing lab assignments and offered help for technical issues.

Student Intern at DrayTek, HuKou, Taiwan   Summer 2015
Product Quality Control Department
- Conducted product testing on internet routers, APs, modems and delivered detailed reports.
- Corresponded with a team of five engineers to provide technical support in resolving problems for customers, and performed bug reproduction to identify root causes.

PROJECTS

Random Text Generator | Python   Summer 2018
- Created a program that generates random word sentences based on user inputs.
- Implemented using Naïve Bayes and Hidden Markov Model techniques.

Hidden-Message Image | Python   Spring 2018
- Devised a program that allows users to hide texts in an image of users' choice.
- Implemented algorithms for both encrypting and decrypting the messages.

Machine-Improvised Music | Python   Fall 2017
- Developed an intelligent system that can learn from musical melodies and produce music.
- Conducted statistical analysis on input MIDI files, and used Hill Climbing algorithm technique to generate consistent and pleasant musical melodies.

Online Exam Web Application | JSP, XML, CSS, MySQL   Spring 2017
- Built a web application to administer online exams for students and test makers, including features such as account creation, login, name search, exam creation, and result review.
- Designed a user-friendly interface and organized visual structures for easy navigation.

RELEVANT COURSEWORK

- Analysis of Algorithms • Data Structure • Machine Learning • Artificial Intelligence
- Advanced Computer Vision • Web Application Development • Augmented, Virtual, and Mixed Reality

HONOR & INVOLVEMENT

- **Honor:** Auburn University Dean's List (Spring & Fall 2017)
- **Member:** Association for the Advancement of Artificial Intelligence (2018), USC Association for Computing Machinery (2018), USC Autonomous Underwater Vehicle Design Team (2018)