Jun Li

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EDUCATION

Stanford University, Stanford, CA   Sep 2017 – Jun 2019
M.S. in Computational and Mathematical Engineering (ICME)

Oberlin College, Oberlin, OH   Aug 2013 – May 2017
B.A. in Computer Science   B.A. in Mathematics, High Honors   Associate Member Sigma Xi

COMPUTER SKILLS

Programming   **Python**, **Java**, **C#**, **MATLAB**, **C++**, R, C, Julia, SQL, Scala, Scheme, MIPS Assembly, Shell script
Tools   Unity3D, Spring, Jenkins, Gradle, Docker, Tensorflow, Spark, GitHub, Linux, IntelliJ, Eclipse, vim

WORK EXPERIENCE

Server Software Engineer Intern – Electronic Arts, Seattle, WA   Jun 2018 – Sep 2018
- Designed and implemented a generic **pub-sub pipeline** using **Java 8** in a large scale **Spring-boot** based application that run on **Docker** to distribute backend server game data for multiple data storages.
- Used **Gradle** to configure dependencies and performed static analysis with **Jenkins**. **Unit and integration tested** on **RESTful web services.** Coordinated with designers to make it scalable for future requirements.

Cloud Service Developer Intern – Beijing Shenzhou Aerospace Software Tech., Beijing, China Jun 2016 – Aug 2016
- Worked in the R&D department to research on **Docker** platform for a **PaaS** Cloud computing service.
- Deployed applications with Docker. Used **Docker Swarm** to manage container nodes, integrated with **HAProxy** for load balancing, and tested on **Apache Tomcat** containers.

Teaching/Grading Assistant – Oberlin College, Oberlin, OH   Feb 2015 – May 2017
- Taught and graded for Algorithm Design, Data Structures, Systems Programming, and Information Theory.

RESEARCH & PROJECTS

Machine Learning NIR Image Colorization – Image Rendering Using Machine Learning   Sep 2018 – Dec 2018
- Applied a **L3(local, linear, learned)** model to find the mapping between NIR to RGB visible spectrum images.
- Converted sensor data with affine transformations to approximate high quality Bayer CFA algorithms, used ridge regression with regularized parameters to minimize cross-validation error, and performed CIELAB accuracy analysis with **MATLAB**.

Deep Learning Iceberg Classifier – Kaggle Competition Challenge   Sep 2017 – Dec 2017
- Designed **SVM**, **CNN** and **RedNets** algorithms that identify whether a remote map is a ship or an iceberg.
- Used various scientific **python** packages such as **sklearn**, **keras**, and **cv2** on data visualization, data augmentation, reducing speckle noise in the images, and feature extraction.

Stanford Virtual Heart Research – Stanford Cardiovascular Biomechanics Computation Lab   Sep 2018 – Dec 2018
- Implemented an accurate blood flow fluid dynamics simulation using **SimVascular** for **VR heart surgeries**.
- Wrote **python** heart mesh scripts in **compressed sparse row** form to turn velocity data into particle tracers.
- Incorporated model into **Unity** using **C#** to for **Oculus Rift**; generalized the pipeline for future development.

Physically Based Rendering – Soap Bubble Clusters with Swirly Bokeh Background   Apr 2018 – Jun 2018
- Won **2nd prize** for CS348b Rendering Competition taught by Prof. Pat Hanrahan and Matt Pharr.
- Rendered thin-film interference and Plateau's Law on soap bubble clusters with **C++** in **PBRT**.

Unity 3D Game Development – 3 games: Dreamland; Rhythm Defense; Power in Numbers   Feb 2016 – Mar 2018
- Led a group of 5 completing the design, documentation, prototype and alpha/beta/final release of 2 games on Unity – including a 3D adventure game, a puzzle game and a RTS game. Developed with **Unity** in **C#**.

Senior Mathematics Honors Research – Artin Presentation and 4-manifolds   Sep 2016 – May 2017
- Researched for a year-long honors project on 3- and 4-manifolds using Kirby calculus, group presentation and open book decompositions. Resulted in an honors paper and gave an one-hour talk to the public.

RELATIVE COURSEWORK

Machine Learning	Elements of Statistical Learning	Geometric/Topological Data Analysis
Image Synthesis Techniques	Image System Engineering	Interactive Computer Graphics
Convex Optimization	Numerical Linear Algebra	Algorithms Design and Analysis
Distributed Algorithms and Optimization	Systems Programming	Programming Abstractions