

Jieru Hu

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EDUCATION

University of Wisconsin Madison

Madison, WI

Bachelor of Engineering - Mechanical Engineering (Graduated with Honor)

Aug 2013 – May 2018

Bachelor of Science - Computer Science

GPA: 3.85/4.00

Bachelor of Science - Mathematics

Dean list every semester

EXPERIENCE

- **Undergraduate Research Assistant** Madison, WI
Wisconsin Human-Computer Interaction Laboratory September 2017 – June 2018
 - Implemented the trajectory motion planning for the 6-DOF Kinova MICO arm with MoveIt framework
 - Developed ROS python scripts for controlling MICO Arm to execute different industrial manufacturing tasks
 - Designed and built the communication interface between NodeJS UI server and Python Http server
- **Software Engineering Internship** Seattle, WA
Amazon June 2017 - August 2017
 - Designed and implemented Screenshot Sharing feature within Kindle iOS App into production with Objective-C
 - Built Coral service APIs in Java for storing Encoded Voice data into AWS S3 bucket under Guice framework
 - Developed the voice annotation feature in Kindle iOS notebook and an End-To-End model to synchronize the client voice data across multiple devices
- **Student Software Engineer** Madison, WI
Morgridge Institute for Research January 2017 – May 2018
 - Enriched existing Perl and SQL scripts to display complete code analysis details on Native Viewer result page
 - Developed a low memory-consuming backend service in C to parse code assessment result from XML to JSON
 - Upgraded the SWAMP Perl runtime version from 5.18.1 to 5.26.1 on CentOS with documentation
 - Implemented a feature in PHP server to trigger automatic assessment of new code by GitHub Webhook event
 - Organized and stored SWAMP assessment result data into MongoDB
- **Undergraduate Research Assistant** Madison, WI
Engine Research Center March 2018 – May 2018
 - Parallelized engine simulation code in python with different input temperature and pressure combinations
 - Prepared HTCCondor job submit scripts and managed engine simulation jobs in the HTCCondor Cluster
- **Advanced Engineering Co-op** Fond du Lac, WI
Mercury Marine May 2016 – December 2016
 - Installed and tested the Person Detection module on NVIDIA Jetson TK1 with Linux Bash Scripts
 - Employed Open CV libraries with Python to calibrate fisheye camera and dewarp the live video stream
 - Programmed URDF, SDF, bash scripts and integrated them with open source ROS packages to create a boat docking simulation with ability to perform 2D SLAM tasks visualized in GAZEBO environment

PROJECTS

- **DataScience on Used Car:** Crawl and clean data from cars.com, and perform entity-match and query analysis
- **Texture Synthesis on GPU:** Parallel Implementation of Texture Synthesis on CUDA architecture
- **Name Extraction from IMDB Comments:** Learning-based information extractor which extracts person names from natural test
- **Breast Cancer Diagnosis:** Use quadratic programming to calculate SVM for clinical datasets and predict FNA malignancy

COURSEWORK

Data Structure, Machine Organization & Programming, Numerical Methods, Probability Theory, Algorithms Linear Programming, Operating System, Artificial Intelligence, Computational Geometry, Computer Networks Numerical Analysis, High Performance Computing, Data Science, Machine Learning & Deep Learning (Coursera)

SKILLS

- **Languages:** Java, Python, C, C++, Obj-C, MATLAB, Perl, JavaScript, SQL, PHP, Bash, R, HTML, CSS, XML, JSON
- **Technologies:** CUDA, OpenMP, MPI, ROS, Xcode, iOS-SDK, OpenCV, MySQL, MongoDB, MariaDB, Git, Tensor Flow, scikit-learn, Pandas, Guice, ReactJs, Laval