Jieru Hu

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EDUCATION

University of Wisconsin Madison   **Aug 2013 – May 2018**
Bachelor of Science in Engineering - Mechanical Engineering, Computer Science, Mathematics   *GPA: 3.85/4.00*

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)

EXPERIENCE

Software Development Engineer   Seattle, WA
Amazon   *June 2018 - Now*
   - *Developed Blackjack cards for Amazon India Gateway and Browse page through a server-side data phase integrated with various backend APIs and a client-side rendering phase under Perl Mason Framework*
   - *Maintained and documented the service deployment pipeline, unit test, UI automation test and sanity test*
   - *Contributed to the ASIN filtering service which black-listed and white-listed sellers and brands*

Undergraduate Research Assistant   Madison, WI
Wisconsin Human-Computer Interaction Laboratory   *September 2017 – June 2018*
   - *Implemented the trajectory motion planning for 6-DOF Kinova MICO arm with MoveIt motion planner*
   - *Developed python scripts in ROS to execute various industrial manufacturing tasks on KINOVA MICO arm*
   - *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 Social Sharing feature into Kindle iOS App production in Obj-C*
   - *Built Java service APIs to store and retrieve Encoded Voice data into and from AWS S3 bucket*
   - *Developed the voice annotation feature in Kindle iOS notebook and implemented end-to-end model to synchronize client voice data across multiple devices*

Student Software Engineer   Madison, WI
Morgridge Institute for Research - Software Assurance Marketplace(SWAMP)   *January 2017 – May 2018*
   - *Modified Perl and SQL scripts to display complete code analysis details on the Result Viewer Page*
   - *Developed a low memory-consuming backend service in C to parse code assessment result from XML into JSON*
   - *Upgraded and documented the SWAMP Perl runtime version from 5.18.1 to 5.26.1 on CentOS*
   - *Implemented a trigger in PHP server to launch 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 HTCondor job execution scripts and managed engine simulation jobs on the HTCondor Clusters*

SELECTED PROJECTS

- **DataScience on Cars.com**: Built a pipeline to crawl, clean, entity match and analyze the car data from Cars.com
- **Texture Synthesis on GPU**: Parallel Implementation of Texture Synthesis on CUDA architecture
- **Name Extraction on IMDB Comments**: Learning-based information extractor implemented with cross-validation on five machine learning methods, extracting person names from natural text
- **Computational Geometry in Python**: Calculated Delaunay triangulation and Voronoi diagram for arbitrary set of points in the plane with a self-designed data structure capable of answering different geometric queries
- **Breast Cancer Diagnosis**: Used quadratic programming methods to calculate SVM based on clinical datasets and predict malignancy in diagnostic procedure
- **Tic Tac Toe in React**: Implemented an interactive tic-tac-toe game in the ReactJS framework

SKILLS

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