Jieru Hu

1105 - 6900 Pearson Way
Richmond, BC, V7C0C9

Email: hjr01211@gmail.com
Phone: (608) 770-9836

github.com/JerryHu1994
www.linkedin.com/in/jieru-1994

Education

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

Experience

- **Software Development Engineer II** Redmond, WA - Vancouver, BC
  Microsoft Corporation - Azure Compute *April 2019 - Now*
  - *Developed micro-services in C# including PoolManager(Coyote P#), DeploymentManager, FrontEnd, Key Service as core backend of Azure Batch which handles resource allocation with deployment management, and orchestrates virtual machines for compute jobs and tasks*
  - *Enhanced Batch compute and networking features such as Over-Provisioning, Pre-Provisioning, Ephemeral OS Disk, AcceleratedNetworking, etc*
  - *Designed and developed features like AzureDiskEncryption, EncryptionAtHost, Customer Managed keys, Availability Zones for Pools, Auto-approval connection for Private Link pools, Multiple partition support for Deployment Manager, etc*
  - *Implemented full-stack features on Batch Diagnostic Portal which provides quicker and easier diagnostic for Batch Service using React, TypeScript and Kusto Query*
  - *Developed PowerBI dashboards using Kusto Query and flow automation for monitoring Batch Service SLA and SLO; Wrote query automation to do automatic root cause analysis for pool and node failures; Main Developed owned Batch TDPR(Tenant Deployment Performance and Reliability) investigations across the Azure compute platform*
- **Software Development Engineer** Seattle, WA
  Amazon Corporate LLC *June 2018 - April 2019*
  - *Developed Blackjack card widgets on Amazon India Gateway and Browse page through a server-side data phase integrated with various backend APIs and a client-side UI/UX rendering phase under Perl Mason Framework*
  - *Contributed to the HOTW(Hands-Off-the-Wheel) project which automates content scheduling on thousands of the browse pages, thus minimizing the merchandising effort*
  - *Maintained the deployment pipeline, handled weekly operational tickets, and contributed to project design, wiki documentations and internal team code reviews*
- **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 Corporate LLC *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*
  - *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*

Selected Projects

- **GPU-Based Texture Synthesis**: Implemented the pixel-based multi-resolution synthesis algorithm on CUDA
- **DataScience on Cars.com**: Built a pipeline to crawl, clean, entity match and analyze the car data from Cars.com
- **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

Skills

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