Ziliang Zhang

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Research Interest

Pushing forward to Humane technology which include accessibility/inclusion, non-biased algorithms and intelligent system, and well-being through advancement. Starting with solution to infrastructural problems by researching on Embedded System, Cyber-physical System and IoTs to provide adequate computational power.

Education

Computer Engineering, Master of Science
University of California, Riverside   Sep 2019 - Mar 2021

Cognitive Science with Specialization of Human-Computer Interaction, Bachelor of Science
University of California, San Diego   Aug 2015 - Mar 2019

Research Experience

Graduate Project OpenRPT   Sep 2020 - Mar 2021
Lab researcher @ Extreme Storage and Computer Architecture Lab, University of California, Riverside
- Developed a Complete Human-Computer Interaction prototype using Coral DevBoard and wearables display to perform pose estimation support and deliver output in 720p 30fps videos via teleconferencing software.
- Conducted actual testing with trainer and improved based on the feedback in accessibility and usability. Optimized based on Bluetooth PAN propagation to achieve one-step operation for users.
- **Tensorflow Lite, Bluetooth PAN, OpenCV, PoseNet Package, UNIX operations, Cython**

"On Construction and Application of High-Definition(HD) Maps"   Sep 2020 - Dec 2020
Co-author, editor @ University of California, Riverside
- Compiled paper on HD Maps construction and application. Analyze different approaches in HD Maps construction and how they have been applied to the industry. Constructed the overall taxonomy for the paper
- Honorable project recognized by Dr. Amr Magdy. Submitted to SSTD'21 (17th International Symposium on Spatial and Temporal Databases)
- **Cloud Point Diagram, High-Definition Map, Localization**

When2Buy Co-op Smart Shopping List   Jan 2018 - Mar 2018
Lead Developer @ University of California, San Diego
- Developed the WebApp that can create a sharable shopping list and can be filled out by all participants. It will also add periodic items to the list to reduce cognitive load of all participants
- Programmed the Shopping List's Database. Coded Sharing functionality and add item functionality
- **HTML/CSS/Javascript, Node.js, Sketch, Google Analytics**

Work Experience

Java FullStack Developer   Jul 2021 - present
Java FullStack Developer @ Marlabs, Inc.
- Provided professional solutions for clients like Hilton, Vertafore. Responsible for upgrading web services and implement more RESTful APIs on basic infrastructure.
- Industry skillsets include Spring Framework, AWS SDK, Apache Kafka, Angular, Node.js, H5/CSS3/javascript, SQL and NoSQL Database

Bidround App UI Designer   Jun 2018 - Sep 2018
Frontend Designer Internship @ Bidround System LLC, Berkeley, CA
- Use Sketch to create interactive low/high fidelity prototypes with components that are more natural to users' cognition flow.
- Conducted A/B testing with old App Interface and achieve clear improvement with new design.

Teaching and Volunteering Experience

Teaching Assistant   Sep 2018 - Mar 2019
Teaching Assistant @ University of California, San Diego
- Programmed educational python and java educational material in Coursera and Stepik for 200 students.

- Conducted weekly meeting with team and Developed tasks accessible for all levels by using scratch 2, Alice 3 and codingBat.
- Supervised by Dr. Beth Simon, and followed her education in computing thinking from EDS124BR, UCSD

Volunteering for Town&Country Learning Center   Mar 2018 - Jun 2018

International Volunteer @ Town&Country Learning Center
- Taught K-12 children new media and technologies and encouraged their creativity by using these new technologies formats in video editing and programming
- Brought accessibility of technology to black community by educating the young generation in the technological format.
- Reviewed and analyzed the impact of new technology to these children and their thinking; presented personal reflection on how to encourage accessibility and inclusion for advanced technology

Project with EUNIME   Jan 2018 - Mar 2018

Volunteer Engineer @ Global TIES, University of California, San Diego
- Provided an affordable alternative cooking technique to biomass burning in Tijuana, Mexico; Collaborated with local community group EUNIME
- Designed SolarOven that can serve as an environment friendly substitute and lowered budget compared to biomass burning
- Followed-up with on-site research and application. Deployed functional units to household in the region and passed onto the next team for improvement

Technical Skills

- **Programming Language**: Python, Java 8/11, C/C++, Swift
- **Hardware**: CUDA C, Single Board Computer Application, Edge TPU, AVX Instructions
- **Machine Learning**: Tensorflow, OpenCV, PyTorch, MATLAB
- **Industry**: Spring Framework, AWS SDK, SQL and NoSQL Database, HTML, CSS, Javascript, Figma, Sketch, Node.js, Angular.js, Apache Kafka

Honors and Awards

- Honorable Project awarded by Dr. Amr Magdy   Winter 2020
- UCSD Provost Honor   Fall 2018
- UCSD Provost Honor   Fall 2016

Language

English: Professional
Japanese: Proficient
Chinese(Mandarin): Native

Reference

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