Wenhui Zhu

Github: https://github.com/ChongQingNoSubway
Location: Tempe, Arizona ,USA
Phone number: 6027739980
Email: wzhu59@asu.edu

Education

Arizona State University – ASU Aug. 2022 – Present
Doctor of Philosophy of Science in Computer Engineering *Tempe, Arizona, USA*

Arizona State University – ASU Aug. 2020 – May. 2022
Master of Science in Computer Engineering *Tempe, Arizona, USA*

Northern Arizona University – NAU Aug. 2018 – May. 2019
Bachelor's degree in Electrical Engineering *Flagstaff, Arizona, USA*

Chongqing University of Posts and Telecommunications – CQUPT Aug. 2014 – May. 2018
Bachelor's degree in Electrical and Information Engineering *Chongqing, China*

Skills

Current research field: Machine Learning, Computer Vision, Deep Learning, Distributed Computing
Mathematical Background: Calculus, Linear Algebra, Probability & Statistics, Signal Processing, Random Process
Programming Languages: Python, Java, Matlab, JavaScript, Node.js
Scientific Computing Tools: Numpy, Scipy, Pytorch, Tensorflow
Frameworks: Vue, React, Spring-boot, ElasticSearch, SQL, Next.js, Koa
Version Control: Github, GitLab
Other: Linux, Mobile Software Development, Latex

Publications

- Farazi M, Yang Z, Zhu W, Qiu P, Wang Y, TetCNN: Convolutional Neural Networks on Tetrahedral Meshes, Information Processing In Medical Imaging (IPMI), Jun. 2023 [Oral]
- Zhu W, Qiu P, Dumitrascu O, Sobczak J, Farazi M, Yang Z, Nandakumar K, Wang Y, OTRE: Where Optimal Transport Guided Unpaired Image-to-Image Translation Meets Regularization by Enhancing, Information Processing In Medical Imaging (IPMI), Jun. 2023
- Zhu W, Qiu P, Farazi M, Nandakumar K, Dumitrascu O, Wang Y, Optimal Transport Guided Unsupervised Learning for Enhancin Low-Quality Retinal Images, In IEEE International Symposium on Biomedical Imaging: From Nano to Macro (ISBI), Apr. 2023
- Farazi M, Zhu W, Yang Z, Wang Y, Anisotropic Multi-Scale Graph Convolutional Network for Dense Shape Correspondence, IEEE Winter Conference on Applications of Computer Vision (WACV), Jan. 2023
- Zhu W, Qiu P, Lepore N, Dumitrascu OM, Wang Y, Self-Supervised Equivariant Regularization Reconciles Multiple Instance Learning: Joint Referable Diabetic Retinopathy Classification and Lesion Segmentation, 18th International Symposium on Medical Information Processing and Analysis (SIPAIM). Campinas, Brazil. Nov, 2022.
- Dumitrascu OM, Zhu W, Qiu P, Nandakumar K, Wang Y, "Automated Retinal Imaging Analysis for Alzheimer's Disease Screening," IEEE International Symposium on Biomedical Imaging: From Nano to Macro (ISBI), Mar. 2022
- Zhu W, Qiu P, Dumitrascu OM, Wang Y, "Dual Attention-Based Multi-Instance Learning for Referable Diabetic Retinopathy", IEEE International Symposium on Biomedical Imaging: From Nano to Macro (ISBI), Mar. 2022
- Wu J, Zhu W, Su Y, Gui J, Lepore N, Reiman EM, Caselli RJ, Thompson PM, Chen K, Wang Y, "Predicting Tau Accumulation in Cerebral Cortex with Multivariate MRI Morphometry Measurements, Sparse Coding, and Correntropy", 17th International Symposium on Medical Information Processing and Analysis (SIPAIM), Campinas, Brazil, Nov. 2021

Work Experience

Software Developer April 2020 – July 2020

Company: Shanghai TongRui Network Technology Co., Ltd. (https://www.idaddy.cn/) *Shanghai, China*

- Developed the user-facing application with 3+ million users, using the H5 hybrid application development environment to build the iOS and Android App.
- Responsible for the full-stack development of the back-end management system which collected user data through a burial point in the application, as well as included company financial status / employee information and displayed the data in descriptive graphs for the management teams. The internal management platform was also used to allow product managers to efficiently adapt the internal content (which requires frequently changing data) and layout of the user-facing application on a daily basis.
- Collaborated closely with other engineers to construct a lottery algorithm model, executed each time a user enters the application to provide a discount or free materials.
- Developed the front-end and back-end development of the player section of the app.
- Technologies Used: Vue, CSS, Node, React, SQL, TypeScript, HTML, Java, Spring, KOA, Next.js, RestfulAPI, GitLab CI/CD.
- Project Address: Koudaigushi (AppStore and Google play), Background management (not visible)

Web Developer Sept. 2019 – April 2020

Company: Linktou.com *Shanghai, China*

- Worked closely with team of engineers to develop client-facing front-end application with over 5000 users, front-end architecture, as well as worked on research and development.
- Developed the front-end for the internal management management application to analyze monthly financial status, company data, company accounting, authority management, etc.
- Built a financial model to automatically calculate company financial data and user data such as daily user visits, monthly visits. Displayed data in easily-readable summary graphs on dashboard.
- Consistently performed function upgrades to optimize prior code for improved efficiency.
- Technologies Used: Vue-SSR, CSS, Node.js, JavaScript, React, SQL, TypeScript, HTML, GitLab CI/CD.
- Project Address: https://www.linktou.com/index, Background management (not visible)

Course Project and Contest Experience

Meta-learning algorithm for few-shot classification, 2021-2021
Primarily responsible for designing the algorithm, such as problem formulation and Mathematical principles and derivation.
Project Address: Mygithub

Fuel Efficient Navigation, 2021-2021
Working with team members to develop a machine learning algorithm for the minimum fuel consumption of traffic lights and traffic flow.
Project Address: Mygithub

CoronavirusMonitor-AndoridApp, 2021.Jan-2021.Feb
Mainly responsible for the use of sensors to measure breathing and heartbeat frequency algorithms on Android phones.
Project Address: https://github.com/ChongQingNoSubway/CoronavirusMonitor-AndoridApp

Markov chain Monte Carlo in image mosaic, 2020
Responsible for drawing image mosaics using the MCMC algorithm.
Project Address: https://github.com/ChongQingNoSubway/MCMC-algorithm-processimg

generic parallel sort and join algorithm,2020.
Responsible for building a generic parallel sort and parallel join algorithm for PostgreSQL database.
Project Address: https://github.com/ChongQingNoSubway/

Hadoop equition, 2020.
Responsible for writing a map-reduce program that will perform equijoin based on Hadoop Framework.
Project Address: https://github.com/ChongQingNoSubway/hadoop-mapredude

Hotspot-Analysis-Apache-Sedona-Template, 2020

Responsible for applying spatial statistics to spatio-temporal big data in order to identify statistically significant spatial hot spots using Apache Spark.
Project Address:https://github.com/ChongQingNoSubway/Hotspot-Analysis-Apache-Sedona-Template

The Subterranean Pooper Scooper: Team Bat Bot, 2018-2019.
Responsible for building part of the robotic arm, testing and debugging the robot arm code as well as sampling data and server transmission.
Project Address: https://ceias.nau.edu/capstone/projects/EE/2019/SubterraneanScooper-S19/

Computed Tomography system parameter calibration and imaging:Contemporary Undergraduate Mathematical Contest in Modeling Team, 2017.
Responsible for building mathematical model and calculation method based on the topic, and collaborating with team members to solve model optimization problems.
Project Address: paper work

Aircraft war game design based on MSP430, 2015-2016.
Responsible for designing and programming Aircraft war by using VHDL based on TI MSP430.
Project Address: Course Porject

Professional Summary

Experienced mobile, full-stack and front-end developer with a passion for learning who faces challenges head-on. Team-player with strong communication skills who enjoys working with diverse groups of people. Currently studying machine learning and algorithms to strengthen my mathematical foundation and further my skills in the computer science field.