ZHENG DONG

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SUMMARY

Computer science student (expected MS Spring 2024) with an interest in Programming Language (PL) research, especially applied to Human-Computer Interaction (HCI). Advanced coursework, internship, and research experiences in HCI, robotics, and Neuroscience.

EDUCATION BACKGROUND

University of Bristol, Bristol, UK Sep 2023 – Jun 2024
Major: M.Eng. in computer science
Core courses: Advanced Topics in Programming Languages, Applied Deep Learning, Internet Economics and Financial Technology

University of Bristol, Bristol, UK Sep 2020 – Jun 2023
Major: B.Eng. in computer science, GPA: 3.3/4.0

RESEARCH PUBLICATIONS

- **Zheng Dong**, Peiyang Jiang, DanDan Zhang "Health-Metaverse: Large AI Models and Extended Reality-Based Ecosystem for Personalized Home-Centric Healthcare", Under submission, 2023
- Dandan Zhang, Ziniu Wu, Jin Zheng, **Zheng Dong**, Jialin Lin, "HuBotVerse: Towards internet of Human and Intelligent Robotic Things with a Mixed Reality-Aided Cloud-Based Framework" *IEEE Robotics and Automation Magazine*, Under review, 2023

ACADEMIC RESEARCH

Health-care digital twins using generative AI and virtual reality Jun 2023 – Aug 2023
PI: Prof. Dandan Zhang, University of Bristol

- Constructed lifelike avatars with dynamic expressions, utilized advanced computer graphics tools such as Blender and Maya, and employed cutting-edge animation techniques
- Generated natural language processing capabilities in digital twins, incorporated the ChatGPT API, devised an innovative memory mechanism for contextually-aware responses
- Streamlined integration of avatars, speech services, and advanced Language Models (LLMs); demonstrated the synergistic augmentation of healthcare digital twins for personalized and dynamic interactions

Enhancing climate service applying the human-computer interaction theory Jun 2023 – Aug 2023
PI: professor Jacob Rigby, University of Bristol

- Optimized the interface of the East Africa Hazard Watch system by applying human-computer interaction theory, and tailored the design to user preferences through a developed persona report
- Synthesized a comprehensive literature review on Human-Computer Interaction (HCI) for climate service applications, and informed methodological choices and theoretical frameworks from relevant studies
- Assessed the usability and user experience of the climate service website with a heuristic evaluation report, analyzed interface elements and interactions to pinpoint areas for improvement, and delivered reports to ICPAC
- Fostered collaboration with a multidisciplinary team, effectively integrated expertise from varied fields for a holistic approach

WORK EXPERIENCES

Assistant, AI Law Dec 2022 – Feb 2023
Marketing operations department, American

- Collected and searched for information about the layers and laws online
- Labeled the feedback from the users about their satisfaction with the system to build up the machine learning models for supporting the company future decision-making

PROJECTS

Back to Nature Game Dec 2022 – May 2023
Supervisor: Prof. Tilo Burghardt, University of Bristol

- Coordinated team processes, organized meeting and brainstorming sessions, and managed the project progress
- Integrated interactive elements aligning with the game's ecological narrative, and utilized Maya, Blender, Unity, and Affinity design pipelines to implement engaging gameplay models
- Developed and Enhanced realism and visual appeal through custom shaders and visual effects in 3D scenes, and augmented the immersive experience for players within the game environment

Smart Home Robotics iCloud Monitoring Website Jul 2022 – Sep 2022
PI: Prof. Dandan Zhang, University of Bristol

- Constructed two robots, a smart home robot and a smart dog robot, achieved innovative solutions for smart living environment
- Utilized Arduino, Django, and Raspberry Pi technologies to create to seamless user interface, and facilitated real-time monitoring and control through a user-friendly mobile application
- Implemented Django framework for web development, and acquired a new skill set and applied in an iCloud-based monitoring system

SOCIAL & EXTRACURRICULAR ACTIVITIES

Volunteer, UCESCO (a non-profit volunteer organization), Africa Sep 2022
Helped local people out of poor living situations, focused on agriculture, education, sustainable development, and female business

- Provided assistance to local communities in need, collaborated with a team to organize, and executed projects, focused on improving living conditions and promoting sustainable development
- Solved the job search predicament by contacting the local enterprises and the United National organizations for slums people (arranged the interviews and trained courses)

Student, **Study Abroad: Kyoto and Tokyo University, Japan** Feb 2019
Study tour project in Japan organized by Kyoto University

- Academic communication about collecting the data about the Satellites monitoring changes in ocean about the weather service application
- Explored the intersection of Japanese technology and culture through visits to leading technology companies and cultural landmarks

SKILLS

Languages: English (academic, communications) Chinese (native) **GRE:** 334 (Verbal: 164, Quantitative: 170, Analytical Writing: 4)
Programming: Python, Java, R languages, Web development (HTML, CSS, JavaScript), MATLAB, Go, C++, C