Chongshen Yang

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SUMMARY

- Proficient in Java, Python, and SQL; skilled in JavaScript frameworks and CSS.
- Experienced with TensorFlow and PyTorch for deep learning applications and machine learning algorithms.
- Background in deep learning and cross-modality research; well-versed in machine learning techniques.
- 1+ years of experience in front-end, back-end, and mobile development.
- Co-authored and presented findings in ICIG 2023 and ChineseCSCW23, published in Lecture Notes in Computer Science.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R
Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI
Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib

EDUCATION

University of Ottawa x Carleton University OTTAWA, ON
Master of Computer Science(COOP) *Aug. 2024 – Present*
- **CO-OP Work terms:** 2025 Summer, 2025 Fall, 2026 Winter

Hefei University Of Technology HEFEI, CHINA
Bachelor of Software Engineering *Aug. 2020 – July. 2024*
- Achieved A in Java, python programming course, Software Architecture and Design Patterns, Software Development Process and Project Management, Software Testing and Quality Assurance, Cloud Computing and Software Service Undergraduate Machine Learning courses
- Published two conference papers in research projects

EXPERIENCE

Research Assistant June 2022 – July 2024
Intelligent Interconnected Systems Laboratory, Anhui Province (Hefei University of Technology) *HEFEI, CHINA*
- Developed interactive data visualizations for complex datasets using Vue.js and D3.js, creating user-friendly interfaces to support research insights and improve stakeholder usability.
- Managed data storage and retrieval using MySQL, optimizing query performance for efficient data handling and data-driven decision-making.
- Utilized deep learning frameworks (TensorFlow) to train and validate a Deep Discriminative Hashing model for cross-modal medical image and text data, enhancing retrieval accuracy and efficiency in computer-aided diagnosis.
- Fine-tuned model parameters to boost computational efficiency and diagnostic performance, achieving significant improvements over traditional methods.
- Collaborated in research, co-authored two conference papers, and presented findings at ICIG 2023 and ChineseCSCW23, with publications in the Lecture Notes in Computer Science series.

Full-stack Developer intern Feb. 2022- Aug. 2022
Guochuang Software Co.,Ltd. *HEFEI, CHINA*
- Backend Development (Spring Boot): Created RESTful APIs for managing appointments, user authentication, and data flow, optimizing database interactions to support high booking volumes.
- Frontend Interface (Vue.js): Built a responsive, user-friendly UI for viewing time slots, booking appointments, and receiving confirmations.
- User Authentication and Role Management: Developed role-based access for users and admins, enabling staff to manage bookings, availability, and visitor flow.

Mobile Application Developer intern April. 2023- Aug. 2023
Guochuang Software Co.,Ltd. *HEFEI, CHINA*

- Designed interactive UIs with Flutter's widget library, using CustomPainter for complex layouts and AnimationController for smooth transitions.
- Integrated RESTful APIs and Firebase (Firestore, Auth, Cloud Functions) for real-time data synchronization and user authentication.
- Managed asynchronous requests and error handling with Dart's Future and Stream APIs, ensuring efficient front-end and back-end communication.

PROJECTS

Cooperative Work Visualization | *Python, Flask, D3.js, MySQL* Sept. 2022 – June. 2023
- Evaluated the effects of hypergraph-to-graph conversion on visualization techniques for cooperative work, using a multi-metric approach to assess model performance and clarity in social computing applications.
- Developed and implemented graph and hypergraph models to understand cooperative behaviors, analyzing model variations to improve representation accuracy and visualization effectiveness.
- Co-authored research findings and presented results at ChineseCSCW 2023, contributing to Springer's Communications in Computer and Information Science series.

Cross-Modal Hashing-Based Computer-Aided Diagnosis | *Python, Tensorflow, Latex, Git*May. 2022 – Feb. 2023
- Developed a deep discriminative hashing model to enhance cross-modal retrieval accuracy and efficiency, enabling effective diagnosis by linking medical images and textual data.
- Improved diagnostic accuracy in computer-aided diagnosis applications, supporting healthcare professionals by facilitating rapid and reliable data retrieval.
- Co-authored research findings and presented the project at ICIG 2023, published in Lecture Notes in Computer Science, demonstrating innovative applications in medical data analysis.

CERTIFICATES

- Deep Learning Coursera specialization(Andrew Ng DeepLearning.AI)
- Machine Learning(Stanford university)

PUBLICATION

- Deep Discriminative Hashing for Cross-Modal Hashing Based Computer-Aided Diagnosis
- How Hypergraph-to-Graph Conversion Affects Cooperative Working Visualization: A Multi-metric Evaluation