Tianye (Jerry) Ding

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EDUCATION

Northeastern University, Boston, MA — Sept. 2020 - Present
Khoury College of Computer Sciences — Expected May 2024
Candidate for Bachelor of Science in Computer Science with a concentration in Artificial Intelligence

Relevant Courses: Machine Learning and Data Mining | Artificial Intelligence | Game Artificial Intelligence | Fundamentals of Software Engineering | Object-Oriented Design | Algorithms and Data | Computer Graphics | Computer System | Mathematics of Data Models | Programming in C++ | Database Design
Honors: **GPA: 3.82/4.0** | Dean's List
Activities: Varsity Rainbow Six Siege Team | UniHack21 Hackathon

TECHNICAL KNOWLEDGE

Languages: Java | Python | C++ | MySQL | Racket
Libraries: PyTorch | NumPy | TensorFlow | OpenCV | OpenGL | Swing
Systems: Windows | Linux | Mac OS X
Applications: JetBrains Suite | Git | Microsoft Office Suite | Adobe Creative Suite

WORK EXPERIENCE

Undergraduate Researcher, **Visual Intelligence Lab at Northeastern,** Boston, MA — Jan. 2023 – Present
- Conduct cutting-edge research in 3D reconstruction and scene understanding from stereo images
- Collaborate with my professor and colleagues to design and implement experiments, analyzing results
- Play a key role in my research of developing a novel computer vision model for obstacle detection

Machine Learning Research Engineer Internship, **Deep Ivy Inc**., Boston, MA — Aug. 2022 – Dec. 2022
- Implemented TensorFlow and PyTorch frontend functions for Ivy machine learning framework
- Participated in the development of graph compiler and framework transpiler
- Reviewed and monitored pull requests from open-source community contributors

TA for Fundamentals of Computer Science II, **Northeastern University**, Boston, MA — Jan. 2022 – May 2022
- Held office hours to help students manage academic issues and understand complex course concepts
- Supported weekly lab and monitored student performance on completing assigned tasks
- Graded homework assignments and provided feedback to students

PROJECTS

ODTFormer | Python — July 2023 - Present
- Play a vital role in the development of a novel efficient stereo obstacle detection and flow estimation model
- Collaborate closely with Prof. Huaizu Jiang to conceptualize and implement the project's architecture
- Conduct thorough experiment analysis, optimizing the system for enhanced performance and functionality
- Project homepage: https://jerrygcding.github.io/odtformer/

Deep Oblique Decision Tree (DODT) | Python — Mar. 2023 – May 2023
- Designed and implemented a novel machine learning architecture for classification tasks
- Conducted experiments across different machine learning models, analyzed performances and results
- Project repository: https://github.com/John-C-Kuang/Deep-Oblique-Decision-Tree

Improved Runtime Heuristic Functions | Python — Mar. 2022 – May 2022
- Read and analyzed papers upon runtime heuristic optimization for A* search under general map setups
- Built our map testing framework in Python and developed algorithms for different theoretical approaches
- Tested and compared different heuristic functions on their runtime performance and computational efficiency

INTERESTS

Artificial Intelligence, World Travel, Competitive Rainbow Six Siege, Game Streaming, Video Editing, Billiards