Ruida Zeng

Providence, RI | (405) 339-5125 | ruida.zeng@vanderbilt.edu | https://www.ruidazeng.com

Summary

Passionate software engineer with experience in machine learning models and system development; active team player with leadership mindset; seeking a summer internship position in a fast-paced and challenging environment to utilize technical skills and experience

- Problem Solving
  4 years of experience in competitive programming contests, 1st place team at the Vanderbilt University Programming Contest
- Communication
  Experience with budget management and event scheduling, effectively and promptly communicated details to supervisors
- Programming Languages & Technical Skills
  Python, C, C++, Scheme, R, Java, JavaScript, Assembly, MS Visual Studio, Debugging, Computer Assembly, Wireless Networking (Google IT Support Professional Certificate)
- Operating Systems
  Windows XP/Vista/7/8/10, Linux, UNIX

Education

Brown University | Providence, RI
Master of Science in Computer Science August 2022 – May 2024

Vanderbilt University | Nashville, TN
Bachelor of Science in Computer Science & Mathematics August 2018 – December 2021
Honor: Dean's List (5 semesters)
Relevant Courses: Algorithms, Intermediate Software Design, Program Design & Data Structures, Programming Languages, Operating Systems

Work Experience

Vanderbilt University School of Engineering | *Undergraduate Teaching Assistant* | Nashville, TN January 2019 – May 2021
- Held 4-8 office hours weekly and provided academic support on homework and projects for 70-200 students
- Communicated with professors and other TA's weekly to discuss grading rubrics and student performances
- Graded programming assignments, quizzes, and exams on time with constructive feedback

Institute for Software Integrated Systems | *Summer Intern* | Nashville, TN April 2020 – August 2020
- Designed and implemented communication network simulation of cyber-physical system with variable fidelity using OMNeT++
- Maintained consistency of network data during node transitions that happen at run-time using switching time delay and retransmission

Vanderbilt University School of Engineering | *Summer Research Fellow* | Nashville, TN April 2019 – August 2019
- Assisted Ph.D. students in setting up locomotion experiments conducted on sensor-based virtual reality systems
- Performed cluster analysis on the collected experimental data using Python scikit-learn libraries
- Created a poster and delivered a summary to 100 participants at the Vanderbilt Research Conference

Project Experience

Stratus | Cloud Computing | *Professor Aniruddha Gokhale* | Nashville, TN August 2021 – December 2021
- Designed and deployed a cloud-based deep learning end-to-end full-stack system in a team of 4
- Trained deep learning model to recognize handwritten digits in a distributed fashion using Spark ML packages
- Launched three virtual machines (one Kafka zookeeper, two Kafka brokers) on Chameleon Cloud using Ansible and Vagrant
- Achieved full-stack implementation with a Python Flask backend to handle requests and a frontend dynamic canvas using JavaScript
- Created Docker containers using Kubernetes and load balanced over the virtual machines using NGINX
- Successfully delivered a pitch to a committee of professors for final "Immersion Vanderbilt" project approval [GitHub] [paper]

DibuAR | Nashville, TN November 2019
- Developed an artistic therapeutic application using augmented reality that allows drawing and interacting with nature in 3D-space
- Applied Unity's line rendering framework to achieve free drawing feature and utilized Raycast Manager for plane detection
- Developed C# code to associate start/stop function with touch
- Presented the project to an audience of 500 at VandyHacks VI, winning 2nd place overall out of 100 teams [Devpost]

Research Experience

Vanderbilt University School of Engineering | *Professor Jules White* | Nashville, TN January 2020 – April 2022
- Worked with 20 team members on an autonomous visualization system within the context of non-traditional pathways
- Converted raw resources gathered using Intel 435-I camera with information such as RGB and depth mappings to usable formats
- Analyzed several machine learning models from past research to mitigate the discrepancy between predicted and real gathered data
- Built new heartrate prediction neural network models using LSTM and Dropout layers

Leadership Experience

VUcept | *Student VUceptor* | Nashville, TN May 2019 – February 2020
- Peer mentored a group of 18 first-year students through a 14-week extended orientation program called the Vanderbilt Visions
- Collaborated with a faculty partner to co-facilitate weekly discussions on difficult topics based on the required curriculum

Interests

Dallas Cowboys, Sherlock Holmes, Taylor Swift, Jeopardy!, Piano, Cinematography, Walt Disney World, Counter-Strike