Kichang Song

Email kichangsongks@gmail.com
Phone 405-476-3828
Website kichangsong.com
GitHub github.com/Kichlids
LinkedIn linkedin.com/in/kichang-song

Education

B.S. Computer Science, University of Oklahoma. **(Aug 2017–May 2021) GPA: 3.82**
Electrical and Computer Engineering Minor
Mathematics Minor

Skills

Languages C, C++, C#, HTML/CSS, Java, JavaScript, MATLAB, Python, R, SQL, Visual Basic .NET
Tools Arduino, Autodesk Inventor, Computer Vision, Git, Linux, Machine Learning, Power BI, Raspberry Pi, ROS, Unity Game Engine

Work Experience

Learning Spaces IT Technician **University of Oklahoma – Norman, OK (Feb 2020–Present)**

- Worked to create the best possible learning environments by maintaining all technological tools on campus in working condition and responding to faculty assistance requests.
- Helped the university's transition in response to COVID-19 by providing concise remote support for Zoom, Canvas, and MyMedia applications for OU faculty and students and scheduling COVID-19 testing appointments for residents in Oklahoma City and Tulsa.
- Redesigned University of Oklahoma Information Technology website, resulting in a concise and compact design that includes information of technological tools available in all rooms and buildings using HTML, CSS, and Javascript.
- Created and launched a Power BI visualization of student ratings of professors and courses from a dataset stored as a spreadsheet to aid faculty members in visualizing students' responses clearer.

Junior Developer **OrionNet Systems – Oklahoma City, OK (Jun 2018–Aug 2018)**

- Developed a report for a medical application using C# and VB.NET that allows for patient information and diagnostics to be recorded.

Engineering Involvement

Sooner Competitive Robotics **Treasurer (Aug 2019–Present), IEEE Team Captain (Aug 2018–Apr 2019)**

- https://github.com/SoonerRobotics
- IGVC Software Team(Aug 2019 – Present)
  - Developed C++ code that collects GPS data and publishes the data via ROS nodes.
  - Obtained images from XBox Kinect camera, transformed images into a bird's eye POV, as well as obtained depth data to develop vision software to be used alongside the LiDAR to distinguish lanes and obstacles on the road using Python, ROS, and OpenCV library.
- IEEE Captain
  - Guided a team of 10 students on different subteams to compete in an autonomous robotics competition.
  - Led the software and mechanical design and development of an autonomous robot using C++, Python, Arduino, Raspberry Pi, and Autodesk Inventor.
  - Implemented Computer Vision techniques to identify a small white cube on the ground and the character painted on a face of the cube.
  - Developed a master/slave communication system between the Raspberry Pi and Arduino Nanos to control robot movement and obtain camera images.
- IEEE Mechanical Lead (Aug 2017 – Apr 2018)
  - 3D modeled and printed the chassis and various apparatus of the robot using Autodesk Inventor to provide adequate space for all electronic parts on the robot and functionalities planned for the competition.

OU Game Dev Association **Vice President (Aug 2019–Present), Treasurer (Aug 2018–May 2019)**

- Focused the organization to suit the needs of incoming OU students by organizing game development resources and creating game development lessons covering Unity Engine and C# programming.
- Created a Blackjack game on Unity Engine, where the player plays blackjack against the dealer and an AI player, trained using reinforcement machine learning methods from scratch.
- Developed a single player survival game, which has been submitted to Ludum Dare Game Jam (https://hambonair.itch.io/babysitter).
- Developed a realistic COVID-19 simulation on Unity for the Learning Spaces workplace that tracks the number of employees infected to raise awareness of the importance of wearing masks and social distancing.

Other Activities and Projects

- Created and implemented a neural network with gradient descent backpropagation algorithm to predict forest fires in a national park in Portugal with 1.48 root mean square error.

Honors and Awards

- President's Honor Roll - Awarded to University of Oklahoma students for maintaining a 4.0 GPA for the corresponding semester
    - Fall 2020 semester
    - 2019-2020 academic year
- Dean's Honor Roll - Awarded to University of Oklahoma students for maintaining a 3.0 GPA for the corresponding semester
    - 2018-2019 academic year
- Earnest W. Reynolds Scholarship (2019) - Awarded by the University of Oklahoma School of Electrical and Computer Engineering Scholarship Committee to academically outstanding electrical and computer engineering students.