Fanzhe Lyu

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EDUCATION

Georgia Institute of Technology (GPA:4.0)   Atlanta, GA
  Major: Computer Engineering   *Aug. 2016 – May.2020*
  Minor: Computer Science

EXPERIENCE

Georgia Institute of Technology, IVA Lab   Atlanta, GA
*Undergraduate Research Assistant, **Presidential Undergraduate Research Award Recipient***   *Aug 2017 - Present*
  - Researching on automatic navigation of ground robots using Compute Vision.
  - Investigating safer robot navigation algorithm in dynamic and changing environment.
  - Developed data fusion algorithm that improves extended-local navigation with around 20% more successful rate than the baselines.

NCR Corp. (National Cash Register)   Atlanta, GA
Silver Software Engineering Summer Intern   *May 2018 – Aug 2018*
  - Worked across an Android app with over millions of lines of code, and hundreds of thousands of users and infrastructures processing millions of transactions per day.
  - Initiated new contracts in data and standardized communication procedures across all NCR Silver platforms.
  - Architected push notifications, provided whole implementation from infrastructure to client, eliminating 5-minute order wait time.
  - Introduced instrumentation testing frameworks for future developers to look of.
  - Created new camera scanning features, saving millions of users' manual inputs.

ESTUN Robotics Co, Ltd.   Nanjing, China
Application Software Engineering Intern   *May 2017 – July 2017*
  - Developed robot's QA data monitoring system, automating more than 20 workers' job.
  - Proposed new hardware and software IOT solution for monitoring robots' operation remotely, with 50% cost of current devices.

Georgia Institute of Technology, ECE 2031   Atlanta, GA
Undergraduate Teaching Assistant   *Jan 2018 - Present*
  - Teaching over 30 students about designing and building digital systems, and VHDL programming on FPGAs in ECE2031 Digital Design Laboratory.

Georgia Institute of Technology, ECE   Atlanta, GA
Tutor   *Aug 2017 - Present*
  - Holding weekly tutoring session on Digital System Design, Digital Signal Processing, and Hardware/Software System programming in ECE Department.

SELECTED SIDE PROJECTS

Modbus++ (An Open-Source C++ Modbus-TCP library)   *July 2017*
  - Developed concise and easy-use, open-source Modbus TCP library targeting at C++.
  - Supported more than 50 groups(known) with their projects on Modbus-TCP related projects.

Smart Watcher (A intelligent security camera)   *Oct 2017*
  - Initiated an intelligent surveillance system responding to visitors and analyze data from them.
  - Architected data analysis platform on the data collected camera with machine learning and vision.

V-Plate (A Voice-Controlled robot waiter)   *Mar 2017*
  - Created an intelligent robot waiter that respond to different verbal instructions sent from phone.

Adaptable Robotic Gripper   *Oct 2016*
  - Entered final round of the BMW Hack-A-Thing Competition.
  - Constructed a robotic gripper that can attach to most of objects, from hard to soft, harsh to fragile.

SKILLS

Coding Languages: C/C++, Python, Java, Scala, Kotlin, Go, MATLAB, MIPS, VHDL, SQL, X86 Assembly
Frameworks: OpenCV, Numpy, Kafka, Hadoop, PyTorch, TensorFlow, Eigen, Gazebo, ROS, Android, RabbitMQ
Technology: Linux, Computer Vision, FPGA, TCP/IP, DSP, Embedded System, Machine Learning, Distributed System
Languages: English, Chinese, German
Hobbies: Piano – 15 years, Electric Guitar – 5 years, Percussion – 2 years