Wenxuan Zhu

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Educational Backgrounds

- Wuhan University of Technology *Sept. 2012 – June 2016*
  - Major in Software Engineering: Overall GPA: 82.7/100, Junior year: 85.9/100
- North Carolina State University *Aug. 2016 – May 2018*
  - Master of Computer Science: Overall GPA: 3.5/4.0

Internship/Work Experiences

- Software Engineer, Echelon Diagnostics, Inc. *July 2018 – present*
  supervised by John Burke
  - Algorithms researches and development in route planning and image analysis
  - Tool development/customization for various projects including igv.js, batchit(Go), smaller DevOps tools
  - Cloud-based application designs/development with AWS,including PGTai, PGTM, Safekey (Docker, Cloudformation)
  - UI design for multiple web applications
- Intern, Android/Cocos Developer, 1-xing Co., Ltd. *Oct. 2014 – July 2016*
  - Project lead, Nano Trip
  - Worked on project for Wuhan Metro Maintenance Department as Android developer
  - Worked on several game projects including 2D-auto-runner Fruit Run, a Breakout variant physics game Crazy bounce in Cocos2d-JS

Selected Projects

- Safekey: verify(customer-facing), auth(lab-facing) *May. 2020 – present*
  - UI design and frontend development (React, Android)
  - Backend account, notification system development (Cloudformation, GraphQL, Docker)
- PGTai, PGTM: cloud-based web applications for labs *Jan. 2019 – present*
  - UI design and frontend development (React)
  - Backend batch, account, notification system design and implementation (Cloudformation, GraphQL, Docker)
  - Developed DevOps tools for faster development cycles and easy deployment
- Image Stitching in Agricultural drone use *July 2018 – Dec. 2018*
  - Technique researching and parameter adjusting for this specific type of images
  - Trained and optimized haar cascade to solve a object recognition problem (OpenCV)
  - Migration to cloud-based application (Docker, Cloudformation)
- **Corteva Flight: route planning algorithm design** *Mar. 2018 – July 2018*
  - Extensive research into TSP and this variant and developed multiple solutions for the flight app (Swift)
- Different communication strategies in Multi-Agent System *Jan. 2016 – Apr. 2017*
  - Designed and implemented foraging problem model in Unity to study multi-agent AI strategies
- Sentiment Analysis and Prediction to News *Sept. 2016 – Dec. 2016*
  - Trained sentiment polarity classifier with mined data from Twitter, developed simple system to predict sentiment polarity given Reddit posts
- **Nano Trip: A Soft-body Physics Game** *July 2015 – May 2016*
  - Infinite runner type game with procedurally generated terrain, on both Android and iOS
  - Simulated soft-body in rigid body physics engine
  - 2nd Prize in Meizu Flyme Android App Design Contest for college students(National) *Oct. 2015*
- Space Invaders on Microcontroller *Nov. 2014 – Jan. 2015*
- An interactive text adventure game built from scratch in C *Dec. 2012 – Mar. 2013*