MONICA (ZITONG) LI

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EXPERIENCE

JP Morgan **London**
Code for Good *Oct 2020*
- Build a web-based application with Flask as a back-end, Google Firebase as database and React.JS as front end framework.
- Coordinated team workload and created demonstration slides with the team.
- The project of NHS virtual work experience won the 1st place in the competition.

UCL Neuroscience **London**
Research Assistant *Jul 2020 - Aug 2020*
- Design FPGA-based system for EEG burst detection as assistive devices for rehabilitation
- Developed MATLAB toolboxes automating identification and analysis of cortical electrical bursting activity, widely adopted by the researchers in neuroscience dept. to help expedite signal processing by hours.
  (Link: `https://github.com/monica0618/EEG-Burst-Detection`)
- Conducted a comprehensive literature review and tested multiple signal processing methods and quantitative analysis.
- Identified the mathematical flaw that caused inaccuracy in the original algorithm. Fixed the previous flaw and proved the correctness of the new algorithm mathematically.

Morgan Stanley **London**
Tech Spring Intern *Apr 2020*
- Learned about prospective career pipelines (Software Engineer, Technology Analyst) at Morgan Stanley.
- Had an overview of software development, DevOps and infrastructure engineering each with their impact on the FinTech industry.

UCL Engineers without Borders Society **London**
Executive *Oct 2019 - present*
- Planned, prepared, advertised and taught micro-controller and programming workshops (based on FPGAs, Arduino and Raspberry pi).
- Helped students design and debugged in both hardware and software domain.
- Delivered engineering workshops in London high schools to encourage STEM among youngsters.

China Communications Construction Company **Harbin**
Hardware Engineer Intern *Jun 2019 - Jul 2019*
- Shadowed fire system engineers, import detector information and operated fire control software.
- Designed reliable micro-controller based fire detection and suppression system that process real-time information from the fire sensor and control facilities.

EDUCATION

BEng, Electronic & Electrical Engineering, University College London **London**
Grade: 90%, 1st Class Expected *Sep 2019 (to Jun 2022)*
- **Solid background in EE:** - Design Analogue and Digital Electronics (FPGA and micro-controller) - Apply signal processing and Analyse phonics and communication system - Understand Nanotechnology and semiconductor
- **Computer Science:** - Intermediate programming skill in C++ and Java - self-study on MOOC: Algorithms, Databases, Functional Programming, Computation Structure.
- **Specialization in Mathematics:** - Data Mining and Analysis - Financial Arithmetic - Advanced Statistics - Econometric
- **Projects:** - Led team of twelve from engineering and computer science, designed, built and tested a interactive bio-reactor with automatic fault detection to preserved vaccine safely.
  - Design and build the digital power supply subsystem for the Antarctic Weather Station project.
  - Built a FPGA based human machine interface (HMI) system controlled by muscle activities to enable user control over heavy machinery through intuitive hand gestures

Undergraduate Foundation in Math and Physics, University College London **London**
*Grade: 86%, A*A*A*A** *Sep 2018 to Jun 2019*
- **Project:** 10-page research project on Optimising Power System Using Artificial Intelligence.

No.2 High School of East China Normal University **Shanghai**
GPA: 3.88 *Sep 2016 to June 2018*

AWARDS

- The Laidlaw Research and Leadership Scholarship 2019-2020.
- Won the global champion as Chinese national team member for IYPT (International Young Physicists' Tournament) 2018.
- Silver Medal in British Physics Olympia 2018.

SKILLS & LANGUAGES

Skills & Languages C++, Java, C, MATLAB, Verilog