JIAXUAN TANG

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EDUCATION

Imperial College London *October 2018 - Present(July 2022)*
(Master of Engineering/MEng) Predicted First Degree(Honour)
Aeronautical Engineering/College of Engineering

SKILLS/COURSES

Software Skills	C, MATLAB(Simulink), JavaScript, Python, Linux, SOLIDWORKS, Creo, Office Cadence, Fusion 360, PLC, Intel Quartus FPGA, Abaqus, VBA, Java
Main Courses	Thermodynamics, Aerodynamics, Mathematics, Finite Element, systems & signals Structural Analysis, High Performance Computing, Engineering design, CFD

WORKING EXPERIENCE

Coohom June 2021 - September 2021
Geometry Algorithms Intern *Shanghai*

· Working in Geometry middle ground group simulation scrum team's code modules including finite element on structure and heat diffusion and computational fluid dynamics. Used Java to realize the interpolation on middle-end post process on data from the solver. Used iso-parametric element to realize fast and efficient mesh searching. Also developed the algorithms to extrapolate the value from integration points to node points for various kinds of elements, increasing the accuracy of calculation to the same level as Abaqus.

· Fixed lots of bugs like making the support to the true cylindrical curve and continuous lines. Supported the development of the acoustic module including the coupling of multiple rooms. Implemented the sparse matrix to realize the 3D topology optimization.

Bosch March 2021 - June 2021
Engineering Test Intern *Suzhou*

· Worked in Engineering Test Lab and was responsible for different tests on automobile electronics like ECU and ESP including temperature shock test, humidity test etc using LabView. Used VBA to do data analysis on the facilitate cost, realized fully automated data process.

· Worked on the automation project of PCB test. Designed the mechanical structure using AutoCad and whole process. Used PLC to realize automated procedure. The project was estimated to help saving 10k anually.

Beckman Coulter - Danaher Corporation April 2020 - September 2020
Mechatronics Engineering Intern *Suzhou*

· Worked in the HW(Hardware) team of CDC(China Development Center) and draw the 2D and 3D diagrams on different parts of the medical devices. Used SOLIDWORKS to edit and improve the pipe diagram to make it more clear and convenient for the service team.

· Used Cadence to design the PCB in order to test the cable's reliability. Realized fully automation test. Used FPGA and PLC to test different PCBs and found over 3 bugs before the installation.

EXTRACURRICULAR EXPERIENCE AND PROJECTS

Aerial Vehicle Design November 2020 - March 2021

· In conceptual stage, designed the baseline layout of the whole plane using SolidWorks.

· In preliminary stage and detailed design, used Matlab to solve the wing loading cases and finish the spar design. Used Ansys and Abaqus to do the topology optimization on wing flap structure and finite element analysis, optimized the mass from 1500g to around 300g.

Computational Fluids Dynamics Project December 2020 - January 2021

· Wrote the Matlab code to solve the Helmholtz equation using both iterative method which is the steepest iterative method for trigonal system and Thomas algorithm which is O(N) time complexity using Dirichlet boundary conditions. Also solved the Diffusion equation using backward Euler scheme with Dirichlet and Neumann boundary conditions using Thomas algorithm, made a 3D mesh plot. Also utilized flux splitting method to solve the one dimensional shock problem by calculating numerical solution.