JT Design Engineer

Jonathan James Tang

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Education

Imperial College London
Dyson School of Design Engineering   2018 - 2022
MEng Accredited by the IED, the IET, and the IMechE (On track for 2:1 Upper Second Class)
Modules Include: Design, Mechanics, Electronics, Engineering Mathematics, Computing, Production and Materials, Gizmo: Physical Computing, Energy in Design (Thermofluids), Big Data, and Engineering Design Project.

Christian Alliance International School (CAIS), HK
2011 - 2018
Alberta High School Diploma (High Honours): Mathematics 30-1 (93%), Mathematics 31 (96%), Physics 30 (91%), Art 30 (91%)

Projects

Connect: Explore
*Expert's Pick in the London Design Biennale
Explore is a device and system to create an independent museum experience for blind visitors.
- Conducted primary, secondary, and tertiary research, on subject matters such as the competitor market, interviews with a blind user, opportunity areas, and compliance with EU legislation and international standards
- Developed concepts and physical prototypes
- Presented idea with slides, and performed voiceover in pitch video

Tetriling Puzzle Algorithm
The tetriling puzzle is a computing project to fill an arbitrary puzzle space generated with tetris pieces.
- Developed a greedy algorithm in Python to fill as much of a puzzle space of up to 1000x1000 in the shortest time possible with great accuracy
- Developed a backtracking recursive algorithm in Python to fill a puzzle space with 100% accuracy

Electrochromic Day Shapes
*Joint first place in Imperial College DesSoc Makeathon
This was a one day makeathon concept design using electrochromic glass as a permanent day shape fixture as an alternative to hoisting.
- Performed ideation in a group
- Used Solidworks to CAD model, render and perform FEA simulation on concept
- Presented idea in a video

Experience

Ocean Infinity (Design Engineering Intern)
Apr 2021 - Sept 2021
Six month design engineering placement at a marine robotics company.
- Learned and practiced model based systems engineering
- Developed a novel, remotely operated flag signalling system for remotely operated marine vessels

Skills

Soft Skills
Please see Extracurricular Activites for examples of soft skills such as: leadership, team work, and interpersonal skills

Design Software
Proficient with **Adobe Suite**, particularly with **Illustrator** and **InDesign**
Proficient with **Solidworks**, for 3D modelling and FEA Analysis, with experience using CES Edupack

Design
Proficient at **Rapid Prototyping**, including **3D Printing**
Experience using laser cutters, and workshop equipment

Coding
Proficient in **Python, HTML,** and **CSS**, with experience in Matlab, Arduino IDE, C++ and Javascript

Productivity & Office Software
Proficient with **Microsoft Office 365**, with experience using **Teams** and **Outlook** for project management, and regularly using Excel and **Excel formulas** for personal account keeping
Proficient with **Google Workspace**

Media Software
Proficient with **OBS**, with experience producing and administrating Church services on **Zoom**
Proficient with **Voicemeeter** and **Audacity**, with experience using **Cakewalk** for multitrack recording

Languages
Native **English** speaker with conversational skills in **Cantonese** and **Mandarin**

Extracurricular Activities

Volleyball (Player and Assistant Coach)
2016 - Present
- Played on various teams (CAIS U20 (ISSFHK), Imperial College Chinese Society team, ICVC (Imperial College Volleyball Club) Mixed team, and ICVC Men's First (BUCS Premiere South)), working with various coaches and players
- Helped coach and run trainings for CAIS in 2018 and 2019 summers

Glow in the Dark (Student Group for Christian Ministry at CAIS) (Member and Student Leader)
2013 - 2018
- Led worship and worship team during school chapels and events
- Planned and led activities with co-leaders on outreach trips to China, teaching English to middle-school students and inviting them to church