Chia Jia Yuan

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Age:	**30**	**Nationality:**	**Malaysian**
Residency Status:	**Singapore PR**	**Notice Period:**	**1 month notice**
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Portfolio:	https://www.jychia.dev/		

Work Experience

Senior Embedded Software Engineer	Schlumberger Singapore	Aug 2019 - Now

- Design, develop and optimize firmware for ESP (Electrical Submersible Pumps) oil pump controller using C++ and python in Linux OS & RTOS
- Design and develop PC software suite to interface with the controller using C# in Windows
- Run software testing and debugging for embedded system firmware and PC software
- Customer side software support and software requirement analysis
- Generate software requirement analysis and documentations
- Is the project administrator for JIRA and BitBucket in the team

Senior Software Engineer	Besi Singapore Pte Ltd, Singapore	June 2016 – Aug 2019

- Is one of the pioneer batch to build up Singapore software team for Datacon products
- Design and develop software for semiconductor equipment and machine using C++ in Linux OS
- Develop equipment's SECS/GEM functionalities
- Perform software testing and debugging for industrial equipment and machinery
- Communicate with internal and external clients for requirements analysis and design
- Customer side software support and software requirement analysis
- Work under agile software development cycle (Scrum) and currently a certified scrum master.
- Work with issue tracking tool (JIRA) and currently one of the administrator for the tool.
- Uses version control system (Git & Bitbucket)

Software Design Engineer	CEI Ltd, Singapore	June 2014 – April 2016

- Design and develop software and user interface for industrial semiconductor equipment and machine in C++, C# and VB in Windows environment.
- Design and develop machine vision application using both commercially available machine vision package (Cognex, Microscan) and open-source vision libraries (OpenCV).
- Design and develop drivers, software libraries and interfacing modules for motion control.
- Perform software testing and debugging for industrial equipment and machinery.
- Provide on-site and off-site software support to customers.

Assistant Operations Engineer (Internship)	Fisher & Paykel Healthcare Ltd, New Zealand.	Nov 2013 – Feb 2014

- Upgraded tester in the production line to an automated system which collects all test results, conducts statistical analysis and uploads results to database.
- Created WPF application which interacts with operators, PLC and SQL database for the tester.
- Performed unit, integration and acceptance tests on production line equipment.
- Performed process validation to determine process efficiency.
- Prepared design documentations and operator procedures for production line changes.

Industrial Trainee (Internship)	Celestica Electronics (M) Sdn. Bhd., Malaysia	Nov 2012 – Feb 2013

- Conducted research for new technology and improvement methods for PCB production process
- Conducted Design of Experiment to improve production yield using six sigma approach
- Successfully improved the production yield for ~11% using newly researched technology

Education and Qualification

Bachelor of Engineering (Honours) Specialised in Mechatronics Engineering	Jan 2010 – Dec 2013	University of Auckland, New Zealand
South Australian Matriculation Foundation Program	June 2008 – Dec 2009	International Education Centre (INTEC), UiTM, Malaysia

Professional Qualification and Certification

Certified ScrumMaster	Scrum Alliance
- Facilitates Scrum events and maintains Scrum artifacts - Suggests and implement improvements in workflow to remove team and organizational impediments - Digital Cert: https://bcert.me/bc/html/show-badge.html?b=shrfxmvn	

Machine Learning by Stanford University on Coursera	Coursera
- Supervised Learning, Unsupervised Learning and best practices in ML - Digital Cert: https://www.coursera.org/account/accomplishments/certificate/HDAEYQDHB2DE	

Machine Learning A-Z™: Hands-On Python & R In Data Science	Udemy
- Practical machine learning implementation in Python & R - Digital Cert: https://www.udemy.com/certificate/UC-JIEOHYWD/	

Angular – The Complete Guide (2020 Edition)	Udemy
- Web application development using Angular 11 - Digital Cert: https://www.udemy.com/certificate/UC-ad05481d-c38f-4acc-a494-cfe0b5ba34e0/	

Angular & NodeJS – The MEAN Stack Guide [2021 Edition]	Udemy
- Web application development using MongoDB, Express, Angular and NodeJS - Digital Cert: https://www.udemy.com/certificate/UC-cbfa0840-4a2a-40a0-bf2b-998a89e949cc/	

The Web Developer Bootcamp	Udemy
- Web development, design and deployment - Digital Cert: https://www.udemy.com/certificate/UC-c842cb68-09e5-4278-9771-a534bd734016/	

Image Processing and Industrial Vision Inspection	Singapore Institute of Manufacturing Technology (SIMTech), Singapore
- Qualification for competency in digital image processing skills & algorithms, vision inspection technology, image-based measurement methods, X-ray image processing and 3D image processing. - Digital Cert: https://github.com/jychia/cert/blob/master/Chia%20Jia%20Yuan%20-%20Cert%20for%20PE%20WSQ%20Graduate%20Diploma%20in%20Precision%20Measurements%20%26%20Characterization.pdf	

Competition & Projects

MapEat	
Singapore	Launched on 12 February 2021
- MapEat is a review-based food map web application created by myself - This project is created from scratch using MEAN stack (MongoDB, Express, Angular, NodeJS). - Web application link: https://www.mapeat.app/	

National Data Science Challenge 2019	
Singapore	23 Feb 2019 – 23 March 2019
- Is in a 3 person team to produce a machine learning model on product information extraction - Top 14 in the leader board for advanced category: https://www.kaggle.com/c/ndsc-advanced/leaderboard	

Grab AI Challenge 2019	
Singapore	22 May 2019 – 17 June 2019
- Individual machine learning challenge on Traffic Management: this competition requires participants to build a model trained on historical demand dataset and accurately forecast ahead the traffic demand of near future. - Github project link: https://github.com/jychia/GrabAITraffic	

Microsoft Imagine Cup New Zealand Finals	
Auckland, New Zealand	October 2011 – April 2012
- Lead Software Developer in the team - Is one of the top 20 teams in the whole of New Zealand	

Develop 3 windows phone apps	
- Uses C# and XAML to develop 3 free windows mobile apps in Microsoft app store - Pic-Art-So: https://www.microsoft.com/en-sg/p/pic-art-so/9wzdncrcx35g?activetab=pivot:overviewtab - Badminton Scorer: https://www.microsoft.com/en-sg/p/badminton-scorer/9nblggh0b2fq?activetab=pivot:overviewtab - Chord Codex: https://www.microsoft.com/en-sg/p/chord-codex/9nblggh0b2g1?activetab=pivot:overviewtab	

Undergraduate Engineering Final Year Project

Evaluation of Path Tracking Algorithms for GPS Guided Autonomous Ground Vehicle	
University of Auckland, New Zealand	March 2013 – October 2013

- Carry out extensive research regarding path tracking algorithms for mobile robots such as Follow-The-Carrot algorithm and Pure Pursuit algorithm
- Successfully implement path tracking algorithms in a real life autonomous ground vehicle
- Published a paper in University of Auckland Undergraduate Mechatronics Research Journal Volume 6, 2013: https://cdn.auckland.ac.nz/assets/mech/Documents/ug-mech-research-jnl-vol6.pdf

Computer Skills

C-Based Programming Language: C, C++, C#

- Experience in Object-Oriented Design (OOD), developing Graphical User Interface (GUI), building hardware interfacing modules, MVVM and Design Patterns

Web Development

- Experience in Front End framework such as Angular
- Experience in Back End development using NodeJS, Express and MongoDB

Machine Learning

- Experience in Scikit learn, Keras and TensorFlow

Image Processing/Vision Algorithm

- Develop image processing algorithms using third party vision software (Cognex, MicroScan, Teledyne Sherlock) and open source libraries (OpenCV) for vision inspection system
- Involved in development of intelligent vision systems using statistical image processing algorithms.

Database

- Basic experience in NoSQL (MongoDB)

Statistical Analysis

- Basic experience in using Matlab, Octave and R studio

General Purpose Programming and Scripting

- Experience in writing Bash scripts and Python

CAD Modelling

- Experience in using PTC Creo and Solidworks
- Experience in designing and build models using CAD and 3D printing