



SUN Yudong

孙毓栋

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github.com/sunjerry019

Curriculum Vitae

/ 01 Education

- 2015 - 2016 **Hwa Chong Institution (Junior College)**
GCE A Levels H2 4×A's // H3 Distinction
Physics, Chemistry, Maths and German H2
Linear Algebra [NUS] H3
- Selected to pursue Physics and Maths under the Gifted and Talented Education Programme. Excelled and was awarded the Hwa Chong Diploma with Distinction upon graduation.
- 2011 - 2014 **Hwa Chong Institution (High School)**
Integrated Programme Academic Mean Subject Grade 1.27
- Physics and Biology Specialisation with German as a 3rd Language. Graduated with the Outstanding Student Award (OSA).

/ 02 Skills and Abilities

Languages

English
Native Level
Written/Spoken

Chinese
Native Level
Written/Spoken

German
Working Proficiency
TestDaF (TDN 4/5/4/4)

Skills

Proficient

Web Design + Full Stack Development
Frontend JavaScript, HTML5/CSS3
Backend LAMP

*NIX Sys Administration and Automation
shell scripting; server deployment

Git Distributed Version Control System

Python, C++
incl. data processing (gnuplot, numpy)

Data Analysis

Document processing with L^AT_EX

Good

NodeJS, C#, VBA, and MATLAB

Competitive Programming
incl. data structures and algorithms

Computer Security

Signal Processing

Others

Photography, Video Editing

/ 03 Selected Projects

The English Tuition Corner

Full Stack

2017

theenglishtuitioncorner.com

Deployed a Wordpress website and email server for my teacher from a LAMP VPS. Emails were also properly authenticated with DKIM and SPF.

SMB Redesigned

JS

2016

github.com/sunjerry019/SMB_Redesigned

Greasemonkey User Script that incorporated MaterializeCSS to create a custom, better designed user interface to the school's online message board (SMB) at its original endpoints.

photonLauncher

python/bash

2016

github.com/sunjerry019/photonLauncher

Created equipment interfacing scripts used on Linux with pyusb and automated said scripts for repeated data acquisition. numpy and gnuplot were used to statistically analyse collected data. Reverse SSH was utilized for remote monitoring, experimentation and extraction of data without physical access to the lab.

Luggage Tags

C++

2018

Singapore Armed Forces

Modified svg files using C++ to automate the generation of > 1200 personalised luggage tags for an overseas exercise against time and manpower constraints.

svg2eqn

python

2016

github.com/sunjerry019/svg2eqn

Python script that converts simple svg images into parametric equations that can be plotted on a graphing calculator. Used to submit entries for a graphing calculator design competition.

CCA Website

HTML/CSS/JS

2015

github.com/sunjerry019/hci-cca-website

Volunteered to deploy an infosite to my high school server to centralise CCA information for new students.

/ 04 Engagements

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|-----------------------------|--|-----------------------|
| 2018 - Now
/02 | SJPO Alumni Trainer
github.com/sunjerry019/physicsOlympiadNotes

Trained Secondary 3 and 4 juniors in the Singapore Junior Physics Olympiad (SJPO). Went beyond the syllabus to prepare notes, questions and demonstrations to get them interested and excited about Physics beyond the scope of the Olympiad. | Hwa Chong Institution |
| 2017 - 2019
/02 /02 | Operations and Training Administrator

Overcame limitations of provided tools by creating and maintaining a database in Excel to manage the particulars and details of more than 1200 people, including writing periphery tools to automate the verification (e.g. NRIC) and retrieval of information from the intranet using VBA and formulae. | Army / NSF |
| 2017 - 2017
/01 /02 | Teaching Intern
Queensway Secondary School (QSS)

Taught upper secondary express students Physics and Mathematics as an intern. Created worksheets, marked tests and kickstarted the QSS Makerspace for students to explore their interests in tinkering with things. | Physics/Maths |
| 2015 - 2016
/02 /06 | Founding Member, Coding4Children
Ulu Pandan Stars (UP Stars)

Through various mini scratch projects, taught underprivileged primary school children coding in hopes of getting them interested in technology and learning a new and useful skill in this changing times. | Volunteer |

/ 05 Co-Curricular Activities

- 2011 - 2016 **Electronic Communications and Computer Club (EC³)**
Vice Chairman 2014 Web Developer
- Self taught most computer knowledge in this club. Developed skills and gained experience in Web Design Development and Competitive Programming. Exposed to basic computer security concepts. Represented the school in national competitions such as the Singapore Games Creation Competition (SGCC) and National Olympiad in Informatics (NOI).
- 2014 - 2016 **Photonics Interest Group**
Founding Member github.com/sunjerry019/photonLauncher
Measuring the Temporal Correlation of Light from a Mercury Discharge Lamp 2016
- Carried out Photon Statistics experiments in the photonics lab. Created equipment interfacing scripts on Linux using Python 3 with libraries such as pyusb and automated said scripts for repeated data acquisition and processing. Aggregated and analysed large datasets with numpy and gnuplot. Also enabled remote monitoring, experimentation and extraction of data without physical access to the lab through reverse SSH.
- 2015 - 2016 **Science Student' Research Council**
Publicity I/C 2016 Physics Research
ssrc.infocommsociety.com
- Led a team in the promotion of Science as the overall Media and Publicity I/C for the Council and the International Science Youth Forum (ISYF). Administered and designed both the Council and Forum Website in 2016 with Wordpress.