



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
- Outstanding Student Award (OSA) recipient who specialised in Physics and Biology under the selective Special Science and Math Talent (SSMT) Programme. Also achieved 2nd in National Cohort for German as a 3rd Language.

/ 02 Skills and Abilities

Languages

| | | |
|----------------|----------------|-----------------------|
| <i>English</i> | <i>Chinese</i> | <i>German</i> |
| Native Level | Native Level | Working Proficiency |
| Written/Spoken | Written/Spoken | 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/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 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. Large datasets were then aggregated and statistically analysed with `numpy` and fitted with `gnuplot`. `Reverse SSH` was also utilized for remote monitoring, experimentation and extraction of data without physical access to the lab.

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`.

/ 04 Engagements

- 2018 - Now
/02
- SJPO Alumni Trainer** Hwa Chong Institution
github.com/sunjerry019/physicsOlympiadNotes
- Trained Secondary 3 and 4 juniors in the Singapore Junior Physics Olympiad (SJPO). Often went beyond the syllabus to prepare notes, questions and demonstrations to get them interested and excited about Physics beyond the knowledge required for the Olympiad.
- 2017 - 2019
/02 /02
- Operations and Training Administrator** Army / NSF
- Limited in tools, created and maintained 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. Also used `C++` to modify `svg` files to produce personalised tags from said database.
- 2017 - 2017
/01 /02
- Teaching Intern** Physics/Maths
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.
- 2015 - 2016
/02 /06
- Founding Member, Coding4Children** Volunteer
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.

/ 05 Additional Selected Projects

The English Tuition Corner

Full Stack

2017

theenglishtuitioncorner.com

Deployed a website and email server for my teacher from a LAMP VPS that utilised Wordpress, with emails that were 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.

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.