

(Mark) Shui Hu

Applied Physics Graduate
Python developer
Tweaker



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📅 15-02-1995

Hi, I'm Mark. During all my past projects, I have been eager to learn, use and produce innovating tools to tackle any problem. As an organized and creative individual, visual aesthetics is also one of my priorities. As a result, my passion has become to create software that can convey some complex information via visualization.

📁 EXPERIENCE

- Student assistant** 2018 - 2020
Qutech Academy, Delft
Preparation and testing of online courses on quantum mechanics
- Engineer intern** 2018 - 2019
Spirocco Kft., Budapest
Design, simulation and testing of volume flow meter within an asthma inhaler using autodesk CAD and CFD programs and 3D printing
- Marketing and communications intern** 2018
Technoorg Linda Kft., Budapest
Production of a series of educational videos regarding electron microscopy
- Online content manager temp** 2018
Bever BV, Pijnacker
Development of Python software for easier online product management
- Highschool student tutor** 2014 - 2017
iLoveHomework, the Hague
Homework guidance and tutoring on the subjects of physics, mathematics, chemistry and biology
- Software engineer intern** 2016
PinkRF, Nijmegen
3D volume reconstruction from stereometric images via MATLAB

📁 PROJECTS

- OpenSurfaceSim** (Open Surface Code Simulations)
<https://github.com/watermarkhu/opensurfacesim>
Open source simulator for benchmarking and visualizing surface code decoders, written in Python, grant received from the Unitary Fund

📄 PUBLICATIONS

- Quasilinear-Time Decoding Algorithm for Topological Codes with High Decoding Performance**
S. Hu, D. Elkouss
ResearchGate pre-print, (2020)

Languages

Native  Fluent 

Skills

Python3	● ● ● ● ●	Adobe Creative Suite	● ● ● ● ●
Matlab	● ● ● ● ●	Autodesk Fusion 360	● ● ● ● ●
LaTeX	● ● ● ● ●	Autodesk CFD	● ● ● ● ●
Bash	● ● ● ● ●		
SQL	● ● ● ● ●		
HTML5 & CSS	● ● ● ● ●		

🎓 EDUCATION

- Master Applied Physics** 2017 - 2020
Delft University of Technology 8.6/10
Electives on fluid dynamics, imaging physics and quantum mechanics
Master thesis on quantum computation at Qutech; new solutions to quantum error correction on a self-produced quantum simulator in Python
- Bachelor Applied Physics** 2013 - 2017
Delft University of Technology 7.7/10
Bachelor thesis on imaging and biophysics; description and further development of a software package for DNA analysis in MATLAB
- Minor Medical Delta** 2015 - 2016
Erasmus University Rotterdam, Leiden University 7.0/10
Courses on biophysical processes and imaging techniques
- Gymnasium** 2007 - 2013
Lorentz Casimir Lyceum 7.8/10
Curriculae: science & engineering and science & health + German & French
Runner up at the Singapore International Mathematics Challenge 2012

🎯 ACTIVITIES

- Freshman's weekend committee** 2017
Vereniging voor Technische Physica
Presidential role in organizing the freshman weekend activity for 300+ students
- Study Tour committee** 2015 - 2016
Vereniging voor Technische Physica
Graphic design and communication role in organizing a 30-day study tour to South-East Asia and China
- Various committees** 2007 - 2015
Vereniging voor Technische Physica, AECEE Delft, Lorentz Casimir Lyceum
Various roles including organizer of symposia, editor and graphic designer for the faculty magazine and yearbook, and IT related committees
- Participant and Volunteer First Lego league** 2006 - present
First Lego League Benelux, Germany, Denmark, Norway, Japan
Participant and organizational volunteer for the regional, national and international finals of the First Lego league competition