# Hayk Khachatryan

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UCL Theoretical Physics graduate (First Class Honors); Self taught intermediate programmer (Python, Mathematica); Freelance Web Developer

### **EDUCATION**

# Theoretical Physics at University College London

2016-09 - 2019-06

Achieved a degree with First Class Honors

- Practical Mathematics and Computing I & II (Python and Mathematica): 84% & 86%
- Mathematical Methods II & III: 91% & 91%
- Climate & Energy: 83%
- · Representative for 30 Physics students

#### **FMPI OYMENT**

# Software Engineering Intern at Unicomp

2018-07 - 2018-09

Designed and developed a quantum computer simulator in C++. Lectured on quantum computation.

C++ - OOP - Quantum Computing - Communication - Problem solving

# Freelance Web Development

2015-01 - 2018-04

Developed full stack, responsive websites for my clients.

- · JekyllNow, Wordpress
- · Bootstrap, Polymer
- LAMP stacks

HTML 5 - CSS3 / SASS - Flexbox - Handlebars - JS - PHP - Node.js - gulp.js - Flask

## Sales Account Manager at OptionRally in Limassol, Cyprus

2016-03 - 2016-05

Addressed clients' issues with their finances and resolved their concerns with investments. Improved my communication skills through the high pressure environment of finance sales.

CRM - Windows - VOIP - Communication

### Independent Social Media Consultant

2015-02 - 2015-08

Launched social media presences and designed advertising campaigns that increased my clients' following by over 60%.

Facebook - Instagram

### IT Assistant at ZIGZAG in Yerevan, Armenia

2013-07

Diagnosed and troubleshooted networking and technical issues at the IT department of an office of 50 employees.

Problem solving - Logical thinking

# Intern Mechanic at Vitesse in Yerevan, Armenia

2011-07

Repaired and serviced ATVs, jetskis, and snowmobiles at the mechanical department of the BRP Service Center.

Problem solving

### **PROJECTS**

# Creator at chat.hayk.io

2018-07

Flask & SocketIO based webapp that connects with a Slack workspace and carries messages between the two (Hayk (owner) talks from Slack, user talks from webapp).

Python - Flask - HTML - CSS - Javascript - SocketIO - heroku

# Molecular Dynamics Researcher at Can Hot Water Freeze Faster Than Cold Water?

2019-01 - 2019-03

A university research project tasked with investigating the effects of impurities and differing starting temperatures on the freezing of water.

- Designed multiple molecular dynamics simulations in LAMMPS investigating the effects of impurities on the freezing of water.
- Analyzed the data, comparing to data gathered by the experimental team.
- · Visualized our results using VMD and Jupyter.
- · Assembled our research in LaTeX.
- · Transcribed minutes for some meetings.
- · Chaired some meetings.

MD simulations - LAMMPS - VMD - LaTeX - Communication - Leadership - Python - Jupyter

### Systems Engineer and Liaison Officer at Intergrated Engineering Challenge #2: Global Health

2015-11 - 2015-12

A university project where a a multi-disciplinary team of specialist engineers formulate, design and verify an effective strategy for the production and distribution (and monitoring) of a vaccine to combat a Tuberculosis Pandemic in Sub Saharan Africa.

- Designed and developed a control system for the temperature, pH, and stirring of a bio-reactor.
- Developed in C and Processing on a Launchpad microprocessor.
- Liaised with engineers from other disciplines on specifications and requirements.

C - Processing - Communication - Leadership

### **SPEAKING**

### Delegate of Iran at Mediterranean Model United Nations in Nicosia, Cyprus

2015-02

A simulation of the United Nations, done by students from various schools as they discuss and try to find solutions to current world problems.

- · Debated and discussed issues in a formal UN-like setting.
- · Created resolutions to be debated.

Communication - Debating - Public speaking - Research

### Member of Medical Ethics committee at Youth Voice in Nicosia, Cyprus

2014-04

An annual weekend conference where young people between the ages of 15-19 from schools convene to discuss and express themselves on current affairs.

• Debated and discussed various ethical issues in the medical field.

Communication - Debating - Public speaking - Research

### Speaker at Science Rocks in Limassol, Cyprus

2013-03

'Does anything touch?'

• Gave a speech on how no particles ever really touch as a consequence of the electromagnetic force.

Communication - Debating - Public speaking

#### **SERVICE**

### Technical Consultant at Limassol Phoenician Leo's Charity Club

2014-09 - 2015-07

- Helped raise €5365 over two charity events (October December 2014)
  - Social media management
  - Graphic design

Facebook - Photoshop - Delegation - Communication

# **SKILLS**

Web (intermediate) HTML 5 CSS 3 / SASS Polymer Google Analytics

Programming (intermediate) Python Mathematica Git

Programming (beginner) C++ Java C Haskell Javascript

Cloud (intermediate) DigitalOcean

Software (advanced) Photoshop Lightroom Final Cut Pro spreadsheets

Languages (native) English Armenian