

David Rudolf

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TECHNICAL TOOLBOX

Working Knowledge

- Java
- Ionic
- AVR Assembly
- Miranda
- Java FX
- Excel
- SQL
- TypeScript
- Publisher

Intermediate/Basic

- Python (SciPy, NumPy, Spacy, NLTK, Gensim, Pandas, Django libraries)
- Angular JS
- REST APIs
- HTML/CSS
- GitHub
- PHP
- Azure

EDUCATION

2017 – 2018 **University College London - MSc Computer Science** current mark average: 81%

Modules: Programming in Java; Web/Mobile App Development; Architecture and Hardware; Data Structures; Database and Information Management Systems; Functional Programming (Miranda); Foundations of Machine Learning and Data Science (Python); Operating Systems; Compilers; Industrial Project.

Master's Project: Medical text classification with supervised/unsupervised natural language processing.

2012 – 2016 **Imperial College London - BSc Physics** 2.1 (Upper Second Class Honours)

Modules: Mechanics; Quantum Mechanics; Electromagnetism; Astrophysics; Thermodynamics; Mathematics; Solid State Physics; Nuclear Medical Imaging; Atomic and Particle Physics; Finance and Financial Management (Imperial College Business School).

Year 3 - Microprocessor project: Programmed a couple of Atmel microcontrollers in Assembly to build an encoder and decoder system based on the Enigma cypher. Gained an understanding of the most basic internal workings of a microprocessor & accompanying electronics, learned how to program one and became proficient in Assembly.

Year 3 - Final year project (astrophysics): Combined thorough analysis of data acquired by the WISE satellite and computer simulations in order to identify Dyson sphere candidates. The methods of operation and findings were outlined in a 35-page report and were presented to expert academic assessors in a 20 minute-long viva.

EXPERIENCE

July 2016 – August 2017 **Swiss Armed Forces, Switzerland** *Second Lieutenant*

- Commanded a Scout-Sniper platoon of 40 enlisted men which required constant fluent communication in both French and German.
- Commanded a company of 150 enlisted men.
- Assumed responsibility for the day-to-day life, the training and the well-being of all the men under my command.
- Taught newly enlisted recruits in practical and theoretical classes.
- Coached the platoon's non-commissioned officers in developing their leadership skills.

August – October 2014 **Strategic Industrial Capital Partners (SICP), London** *Intern*

- SICP is an energy industry-focused investment firm.
- Assisted the Managing Partners in sourcing and analysing a portfolio of potential investments and reviewing deals from initial due diligence to completion.
- Performed financial modelling, basic investment analysis and due diligence on several potential investment opportunities.
- Helped generate formal investment documents, including investment introduction presentations and investment committee presentations.
- Conducted detailed sub-sector energy industry research on gas-to-liquids (GTL), cogeneration (CHP), and high-pressure equipment (oil services). This included general market research, competitive positioning, process engineering risks and underlying technology profitability analysis.

July – August 2013 **Royal Dutch Shell, Aberdeen** *Intern*

- Worked in the exploration and production department.
- Used petro-physical concepts on data acquired by Schlumberger's Ecoscope LWD tool from a sub-sea well.
- Evaluated wellbore modelling software, incorporating expert feedback from geologists and reservoir engineers.
- Learned about the operations of a multinational oil & gas company.
- Familiarised myself with the different processes involved in the life cycle of an oil well: from geological surveys to the decommissioning of wells.
- Produced a final 40-page report and presented my findings to members of the petrophysics and reservoir engineering departments.

SKILLS

Languages: English (fluent); French (fluent); Russian (fluent); Swiss-German (fluent); Spanish (basic).

INTERESTS AND ACHIEVEMENTS

- Won the gold medal in regional piano competitions for two years consecutively (2011; 2012).
- Enthusiastic skier, surfer, climber and tennis player.
- Have travelled extensively in Asia and Middle East, learning from diverse cultures.