

# David Simon Tetrushvili

UNDERGRADUATE COMPUTER SCIENCE STUDENT • TINKERER

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*"The best opportunity comes when you find you need something that does not yet exist."*

## Profile

I am a striving trilingual Computer Science bachelor student with an international background to specialize in Artificial Intelligence at King's College London. Despite my Bachelor specialization, I am keen to pursue the study of Information Security which I have begun at KCL. In addition, I am interested to open myself other diverse branches of computer science at the postgraduate level with aspirations of doctoral research thereafter. I follow the CTF hacking competition scene as a tool for education as well as self-expression. Currently, I am working on my final year project in non-monotonic reasoning under the supervision of Dr Odinaldo Rodrigues.

## Education

### King's College London — University of London

London, United Kingdom

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (WITH ARTIFICIAL INTELLIGENCE) (HONS.)

Sep. 2017 — Present

- **Current GPA: 86%.** (via [KCL Calculator](#)).
- *Expected first-class degree.*
- Current relevant modules include:  
[Cryptography](#) and [Information Security](#).
- Relevant and high performant modules include:  
[Internet Systems](#) [96% (**Top mark in class**)],  
[Software Engineering Group Project](#) [Major Project: 91%, Written Examination: 92% (**Top mark in class**), Overall: 87%],  
[Introduction to Artificial Intelligence](#) [Coursework #1: 85%, Coursework #2: 90%, Overall: 84%],  
[Programming Practice and Applications \(Java\)](#) [96%], [Practical Experiences of Programming \(C++/Scala\)](#) [91%],  
[Elementary Logic With Applications](#) [92%], [Computer Systems](#) [90%], [Database Systems \(MySQL\)](#) [90%],  
[Introduction to Software Engineering](#) [90%], [Foundations of Computing II](#) [88%], [Data Structures](#) [87%],  
[Programming Language Design Paradigms](#) [82%].

### Berlin International School

Berlin, Germany

INTERNATIONAL BACCALAUREATE DIPLOMA

Sep. 2015 — May 2017

- **Overall 42 points out of possible 45**, including **6/7 points** in Higher Level Mathematics.
- Extended Essay in Computer Science on *Evaluation of Texture Filtering Algorithms applied in VR HUDs*:  
**33/36 points, Grade A.**

INTERNATIONAL-GCSE

Sep. 2015 — May 2017

- 10 IGCSEs with eight being A\* or A, including A\*'s in Mathematics, Physics, and ICT.

## Experience

### Guy's and St. Thomas' Hospital NHS Trust

London, United Kingdom

MOBILE APP DEVELOPER & DATABASE ENGINEER

Feb. — Mar. 2019

- Developed a medical Doctor-Patient communication and test compliance mobile application (iOS and Android) and admin web app (Vue.js) package called "[Prep.](#)" in a team of 8 as the "Major Project" during the 2<sup>nd</sup> year at KCL.
- Managed and maintained a consistent Git version control history and conventions for the whole duration of the project.
- Designed and implemented several mobile application modules intended for use by patients aged c. between 40 and 60 years old focusing on accessibility, utilizing Google's Flutter framework.
- Prototyped/Designed the UI theme and other UI elements for the mobile application with emphasis on ease of use and readability.
- Designed and implemented the back-end database structure used for the app with hard emphasis on privacy, information leak prevention, and enterprise scalability using Google's NoSQL Firebase database.
- Created a [screencast](#) presenting the final application.
- **Solution has been shortlisted for funding.**

# Projects

## Clim-EX: The Climate Animation Explorer

Oxford, United Kingdom

GRAPHICS AND UI/UX DESIGNER, FRONTEND DEVELOPER

Nov. 2019

- Submission to the [Oxford University Hackathon 2019](#).
- Strived to create a project that would promote and elevate the discussion and exploration contemporary issues of climate change.
- Acted as the graphics designer and co-frontend developer; roles that were crucial to the project's success due to its reliance on visual appeal.
- Project was one of the lead contenders to the "Hacker's Choice" award at the hackathon.

## An Argumentation Framework Solver

DESIGNER AND PROGRAMMER

Oct. 2019 — Present

- Currently designing and developing a [Dung's Argumentation Framework Solver](#) for non-monotonic reasoning as part of my final year individual project (Bachelor's Thesis) at King's College London under the supervision of Dr Odinaldo Rodrigues.
- The solver is imaged to use a reduction-based approach to solving both decision and enumeration problems in all four of the original semantics presented in ([Dung, 1995](#)).

## Collegiate Information Portal (KCL-info)

DESIGNER AND PROGRAMMER

Oct. 2019 — Present

- Currently developing an information retrieval web API for use by staff and students of KCL. The main purpose is to provide easy access to important and up-to-date information around campus and all of its aspects in one unified place.

## KCLge Rental Catalogue Web App

BACK-END DEVELOPER

Nov. — Dec. 2018

- In a team of two, developed back-end for an online-store-style web app using pure PHP and JavaScript to access an external API for game data to be cached in a MySQL database.
- Implemented CRUD administrative functionality including multiple account types (guest/user/admin system), game information manipulation and editing and entry, and basic rental functionality such as renting rule/restriction definition and enforcement, black-listing, and game inventory management.

# Skills

**Languages** English, German, Russian.

**Programming** Python, C/C++, Java, Scala, MySQL, NoSQL (Firebase), NodeJS/JavaScript, PHP.

**Tools** (Arch) Linux, Zsh/Bash scripting, Git & GitHub, IaaS providers such as Digital Ocean, LaTeX.

**Misc.** Video/Image Editing and Production (Adobe Suite), Knowledge of Microcontrollers & basic electronics.

# Extracurricular Activity & Volunteering

## KCL Informatics Student-Staff Liaison (Unofficial)

London, United Kingdom

TEMPORARY MEMBER/ACTIVE PARTICIPANT

Dec. 2019

- Volunteered time to raise and discuss possible solutions to student concerns with the KCL Artificial Intelligence Planning (6CCS3AIP) module with both the administration of the faculty and the module leaders Dr Stefan Edelkamp & Dr Daniele Magazzeni as a member of the student body.

## TeachFirst (Placed at Harris Academy Peckham)

Peckham, London, United Kingdom

INSIGHT PROGRAMME INTERN

Jun. 2019

- Underwent crash-course-style pedagogic training focusing on self-development in problem solving, leadership, and innovation through workshops, lectures, and practical exercises.
- Spent one week at Harris Academy Peckham serving as teaching assistant in the department of mathematics.
- Planned, prepared resources for, and delivered a mathematics lesson to a year 8 set 1 class.
- Observing teacher noted "*outstanding use of pre-prepared resources, great rapport built with students, and positive and motivational attitude.*"

## Modern Language Center at King's College London

London, United Kingdom

GERMAN AND RUSSIAN LANGUAGE TUTOR

Apr. 2019 — Present

- Volunteered time to run speaking practice sessions with students at the university and persons of the public.
- Evaluated and gave feedback on the students use of the language and lexicon ultimately to help students express themselves in the language.
- Helped students build confidence in speaking the language in a safe environment.

## Beginner's Programming and Game Development Workshop

Berlin, Germany

WORKSHOP LEADER

May. — Jul. 2017

- Launched an after school beginner's programming workshop after learning that the school did not offer adequate education in the topic 'due to low demand.'
- Thought the basics of programming to a class of c. 30 students of mixed ages using Python 3 and the simple 2D game engine GameMakerStudio.
- This effort was acknowledged in the school's yearbook that year.

## ISMTF Senior Math Competition

Vienna, Austria

COMPETITOR

Mar. 2016

- Participated in the competition in a team of international students to further my insight into mathematics.
- Used the experience to further my communication skills and learn from representatives of foreign to me curriculums and teaching methods.