

David Simon Tetrushvili

UNDERGRADUATE COMPUTER SCIENCE STUDENT • TEACHING ASSISTANT

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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 specialise in Artificial Intelligence at King's College London. Despite my Bachelor specialisation, I am keen to open myself other diverse branches of Computer Science such as Information Security at the postgraduate level. I have aspirations of doctoral research thereafter and am currently 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, UK

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](#), [Information Security](#), [Optimisation Methods](#), and [Machine Learning](#).
- 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%],
[Artificial Intelligence Reasoning and Decision Making](#) [Coursework: 95%, Overall: 86%],
[Artificial Intelligence Planning](#) [82%],
[Introduction to Artificial Intelligence](#) [Coursework #1: 85%, Coursework #2: 90%, Overall: 84%],
[Foundations of Computing II](#) [88%].

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

King's College London

London, UK

TEACHING ASSISTANT

Jan. 2020 — Present.

- Lead practical and tutorial sessions with groups of up to 70+ students in programming language design and introductory software engineering.
- Strive to make tutorial session as interactive and engaging as possible by dynamically working through examples with the class instead of employing repetition-based learning techniques.
- Prepare and give short and hands-on lectures on student-selected topics from the relevant module such as structural induction of trees or similar.

Guy's and St. Thomas' Hospital NHS Trust

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 2nd 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, data 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, UK

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.

"SAF" Argumentation Framework Solver and "SAF-link" API

London, UK

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 uses reduction of the problem to SAT for both decision and enumeration problems in the four of the original semantics presented in ([Dung, 1995](#)).
- The project is expanded by the inclusion of a public REST API which enables web clients to use the rich Argumentation Semantics tool-set bypassing the need for installation and compilation.

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++, Dart, Java, Scala, MySQL, NoSQL (Firebase), JavaScript.

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.

Awards

2020 **Nomination**, Informatics Outstanding Teaching Award

London, UK

Extracurricular Activity & Volunteering

KCL Informatics and Engineering Teaching Assistant Liaison Committee

London, UK

MEMBER

Jan. 2020 — Present

- Act as a contact point to the TA community in case of concerns with module leaders and TA-related procedures.
- In charge of the compilation of the official KCL TA Reference Handbook.

KCL Informatics and Engineering Student-Staff Liaison Committee

TEMPORARY MEMBER/ACTIVE PARTICIPANT

Dec. 2019

- Volunteered time to raise and discuss possible solutions to student concerns about the KCL 'Artificial Intelligence Planning' 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)

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."

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 Game Maker Studio.
- This effort was acknowledged by the institution.

ISMTF Senior Mathematics Competitions & International Junior Kangaroo Competitions

Vienna, Austria & Moscow, Russia

PARTICIPANT

Mar. 2015, Mar. 2014, 2009, 2008

- 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 to learn from representatives of foreign to me curricula and teaching methods.