

TOMAS PEREIRA DE VASCONCELOS

tomasvasconcelos1@gmail.com +44 (0) 7874 198319 tomasvasconcelos.com

COMPUTING SKILLS

Main Skills

- ▶ Extensive experience in data analysis, web scraping, and complex numerical problems.
- ▶ Fluent in advanced Python OOP and it's community standards.
- ▶ Front-End web development & Web Design: built simple websites, blogs, dashboards and web application with HTML, CSS, and JavaScript, with various web technologies.
- ▶ Experience with databases, REST API, and server-side and Back-End development.

Save-A-Space / Company Project

- ▶ Build the engine that deals with the real-time analysis of parking spaces data, availability prediction, using multiple data analysis and machine learning technologies.
- ▶ Developed an API that allows for secure, easy and quick access to the real-time, historical, and prediction data in multiple formats and specifications.

mdsea / Personal Project ([GitHub: git.io/vp9Tp](https://github.com/vp9Tp))

- ▶ Created a full molecular dynamics simulation engine and API from the ground up.
- ▶ Included multiple analysis and visualisation tools, like beautiful 3D renderings.
- ▶ Equipped the engine with an intuitive, friendly and expandable Python API.

RESEARCH & ACADEMIC EXPERIENCE

Skills

- ▶ Extensive experience in collecting experimental data, as well as applying the appropriate mathematical methods and calculating significant statistics.
- ▶ Presented clear and accurate scientific reports and public presentations of individual research as well as multiple group projects and investigations.
- ▶ Intuition to interpret and build mathematical models for simple and complex systems.

BSc Physics Thesis / First Class

Official written-comments from the thesis supervisor and marker:

- ▶ "Tomas observed and brought out [...] a number of very interesting results, of a calibre which would reflect well on a researcher of many more years experience."
- ▶ "The series expansion and MD modelling aspects of the project were definite steps forward in our understanding of the behaviour of this system."
- ▶ "[Tomas] derived single-handedly a series expansion in terms of orthogonal polynomials, which is a new approach as far as I am aware."
- ▶ "His overall performance was in the excellent category."

Publications

- ▶ "The second virial coefficient of bounded Mie potentials" - The Journal of Chemical Physics 147, 214504 (2017) <https://doi.org/10.1063/1.5006035>

EDUCATION

Mathematics GradDip / (Ongoing)

King's College London - University of London, UK
Sep 2017 - Aug 2018

Physics BSc / First Class Honours

Royal Holloway - University of London, UK
Sep 2013 - Jun 2017

Intercultural Exchange Year / 93%

River Ridge High School, USA
Aug 2011 - May 2012

Achieved top grades for Mathematics, Physics and Chemistry with scores in the range 93% to 100%.
Selected for a worldwide science & engineering competition where I won 1st place in Physics.

Science & Technology Diploma / 80%

Salesianos de Manique, Portugal
Sep 2008 - Jun 2011

Scored 85% on the Physics & Chemistry national exam, placing me in the country's top 3%.

WORK EXPERIENCE

Software Developer / Contract

Accelogress Limited, UK
Oct 2016 - Present

Sporadic jobs upon company's request.
Server-side and backend engine maintenance.

Software Developer / Internship

Accelogress Limited, UK
Jun 2016 - Sep 2016

Worked and responded directly to the Company's CEO.
Event prediction and machine learning with Google's scikit-learn library, as well as advanced data analysis.
Server development with docker, nginx, and Django.
Web and dashboard applications with AngularJS.

Visit my personal website for more detailed information on my experience and projects.

tomasvasconcelos.com