# Gregory Wright

## Contact

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**GitHub (new):**
https://github.com/gregorysjwright

## Languages

(Advanced) C++, C, C#, Python,
(Basic-Intermediate) HTML/CSS, SQL, JavaScript, Java

## Awards

Driver's License
Full school Colours for academia.
Various school academic awards in maths, science and ICT/computing.
House award for overall achievement, punctuality, attitude & responsibility.
Jack Petchy award.
Overall school achievement award for best in year for GCSE grades.
Duke of Edinburgh Silver award.
National Citizens service (NCS)

## Sports & Hobbies

Dodgeball (Warwick University, Coventry Silverbacks 2nds captain)
Rock Climbing
Table Tennis

## References

Gareth Alexander (Project Supervisor)
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Erwin Verwichte (Personal Tutor)
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## Education

**Maths & Physics (MMathPhys)** September 2018 - July 2022
**University of Warwick**, Coventry
Years 1-3: First Class (72%), currently year 4 (integrated masters)
*(transcripts available upon request)*
**A-Levels** September 2015 - July 2017
**Southend High School for Boys,** Southend
Maths, Further Maths, Physics, Computer Science: A* A* A*A
AS-Level Chemistry: A
Relevant Masters Modules:
**CS917 Foundations of Computing** (Unusual option). Fundamental module covering all the core principles required for postgrad Computer Science students. *Python*.
**PX425 High Performance Computing in Physics**. Solving Maths/Physics problems by writing optimised parallel code using threads (*OpenMP*) / processes (*MPI*). *C*. *Linux*.

## Projects & Experience (Non-Coding)

**Masters Project** October 2021 – Present
- Theory project on Chiral Active Matter and Odder Elasticity
- Independent and original research and problem solving collaboratively with project partner.
- Report writing, project poster and presentation.

**A-Level Maths/Physics Private Tutor** January 2022 – Present
- Communicating concepts clearly and concisely to multiple tutees with varying ability levels through both online and in-person sessions. Coming up with interesting and unique learning strategies and examples.
- Monitored progress & found weak areas to focus per session.

**Degree Transfer** (6 weeks) Summer 2019
- 4th person ever to switch courses to 2nd year MathsPhys after 1st year Physics without retaking the year.
- 6 weeks to learn 1st year core maths and sit the summer re-sit papers. Serious time-management, commitment, and efficiency to achieve a very difficult feat.

**Tesco's Grocery Customer Assistant** March – September 2018
- Carried out stock rotation, reductions, helping customers, working on tills, etc. Full-time.
- Improved communication skills and provided excellent customer service with regular positive feedback from managers after speaking to the customers.

**STEM Research Project (*Gold Crest Award*)** (4 weeks) Summer 2016
- Researching concepts behind light fields and their capture.
- Plenoptic camera and uses for Lunar Mission One module.

**HMRC Southend IT Internship** (2 Weeks) 2014
- Shadowed day to day work including fixing computers, diagnosing faults, and replacing equipment.

# Coding Projects

**Sudoku App - 'Simple Sudoku (no adds)'** (3 weeks) Summer 2021

- Published on the *Android Play Store* (Publisher Name: *'Gerginator'*).
- First app designed using *Unity* and *C#.*
- 2nd real project using a software development lifecycle with an end-product that isn't simply 'a code file' with *Google Play Console*.

**OpenGL Solar System Simulator** October - July 2017

- Simulated orbits of bodies around a star using *Kepler's laws* and custom game engine.
- Designed a 'simple' 3D game engine using *OpenGL* API.
- Features include a lighting model, texture objects, cube maps, camera movement and GUI implementation with *SDL2* API.
- 3000-line (concatenating c/header files) OOP A-Level project in *C++* with corresponding report.
- Full waterfall SDLC from gathering user requirements, planning to testing and operation.
- Initial problem being my physics teacher wanting a tool to help teach orbits & elliptical motion. The solution correctly predicted the motion of bodies and was user-friendly according to him.
- Achieved almost perfect, best in class, grade with my computer science teacher stating that it could be used as a master's project in a computer science degree due to the complexity.
- Learnt some *Vulkan* due to experiences with *OpenGL* but didn't take on any major projects.

**Penetration Testing** 2020 - 2021

- Became interested in cyber security and read about many ideas in articles and online textbooks.
- Learnt *Python Tkinter* to create a gui to easily implement scripts.
- Became more familiar with network protocols, *Linux commandline*, *Microsoft Azure* to create virtual machines and exploit remote test systems. Using *Kali Linux* tools and writing *Python* scripts. Monitoring network traffic with *WireShark*.

**Wolfram Mathematica** February 2022

- Learnt *Mathematica* to visualise mathematical & physical models and solutions for my masters project report.
- Created visually appealing and accurate figures, by importing the models into *Inkscape*, and well-represented liquid crystal systems notably by my report assessors.

**Other Relevant Degree Modules (1st no. – year of study, MA/PX – maths/physics department)**

- MA3H0 Numerical Analysis & PDE's (*python*, learnt why numerical solutions to pdes work)
- PX390 Scientific Computing (*C*, solving multi-dimensional pdes, finite difference, linear algebra)
- PX277 Computational Physics (*python*, integrating/differentiating & modelling all numerically)
- PX150 Physics Programming Workshop (basic *python* fundamentals & scientific *python*)

**Drivers Test Automation** Summer 2021

- I couldn't wait the 6-months for a driving test nor mindlessly refresh the cancellations page for days on end. I created a macro to automate the process and found a test for ten days later, the minimum allowed. I was able to help some of my less technical peers with this same method.

*Please see Github for code files/images (Newly created account & to be populated over coming weeks.)*

# Additional

**Blender Animation** Summer 2021

- Created and animated models to produce a scene illustrating some fundamental dodgeball concepts. Intention to understand drills without being demonstrated in advance and waste time.

**World Challenge 2017 Mongolia** July - August 2017

- Charity work; helped at a school with teaching, building work, landscaping and the repair of a children's playground. Managed group spending and came underbudget by £400.