

# Philip Keenan

• <https://philipkeen97.github.io> •

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## Qualifications Profile: Technician

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DCU Applied Physics BSc graduate. Currently working as a trainee technician in DCU school of physical sciences. Keen interest in computer programming, problem solving, data analysis & technology. Experience working as part of a team & individually in a delivery-driven environment. Previously worked with large datasets, completing in-depth analysis and reporting conclusive findings. Hoping to pursue a career in technology and problem solving.

### Areas of Expertise

- |                              |                                 |                             |
|------------------------------|---------------------------------|-----------------------------|
| ■ Problem solving.           | ■ Building electrical circuits. | ■ Constructing experiments. |
| ■ Data analysis with python. | ■ Installing Linux distros.     | ■ Contributing ideas.       |
| ■ Debugging experiments.     | ■ Making PDFs with LaTeX.       | ■ Liasing with departments. |

## Professional Experience

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### Dublin City University, Trainee Technician

September 2021 - Present

- Organised & set up experiments for students, ensuring all equipment was working correctly.
- Demonstrated experiments to aid in the learning of physics concepts and equipment being used by students.
- Completed diagnostic testing of broken equipment to understand the issue and designed suitable solutions.
- Worked alongside the School of Chemical Sciences department to organise laboratory equipment.
- Ensured radiation safety was understood and carried out by students working with gamma radiation.
- Changed out and fixed faulty equipment in lab setups without hindering the progress of students.

### Key Accomplishments

- Designed and tested prototypes of equipment for new experiments in line with academia guidelines.
- Completed laboratory safety courses including electrical, chemical and radiation safety.
- Completed in depth testing of problematic experiments, improving lab manuals and documenting changes.

### Pilot Photonics, Internship

February 2020 - September 2020

- Worked as a both a technician and software developer intern.
- Tasked with diagnosing mechanical issues with comb LASERS and designing suitable solutions.
- Aided in the development of a new GUI to improve functionality of devices.
- Created databases to store input values and carried out rigorous testing of interface functionality.

### Key Accomplishments

- Further developed functionality of an existing GUI through the addition of graph generators.
- Tested, debugged & documented issues within existing computer code.

## Education

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### Dublin City University

BSc (Hons) in Applied Physics, 2.1

2016–2021

**Modules include:** Semiconductor Physics, Advanced Programming, Digital & Analogue Electronics, Physics of Renewable Energy, & Statistical Physics.

**Final year results include:** Computational Physics - 75%, Final Year Project - 77%, Quantum Electronics - 80% & Nanotechnology and Surface Analysis - 57%.

### Final Year Thesis: Accelerated Ageing of Novel Transparent Conducting Oxides:

- Designed and constructed a complex circuit to measure change in resistance of a heated thin film oxide.
- Programmed a virtual machine using LabView to automate data collection through a PCIe-card.
- Integrated this virtual machine into a larger, pre-existing machine to improve functionally.
- Carried out extensive data analysis on obtained data in order to produce results and conclusions.
- Maintained a detail log of adjustments made to virtual machine, problems encountered & solutions.
- Delivered a presentation to a panel of academia detailing my findings, conclusions & future prospects.

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## IT & Laboratory Skills

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### IT Skills

- Programming languages include: Python, HTML, LabView, Java, C++, JavaScript, MatLab & SQL.
- Familiarity with: Numpy, Matplotlib, Linux shell & SSH.
- Use of GitHub & version control to write and deploy my website along with programming projects.
- Daily use of Microsoft Word, Excel & Powerpoint.
- Vigourous debugging of Windows OS & Linux distrobutions including Debian & Arch Linux.

### Laboratory Experience

- Weekly experimentation utilising oscilloscopes, lockin amplifiers & Vernier data logging devices.
- Worked with Argon plasmas & Computed Tomography scanner.
- Extensive use of Numpy for data manipulation along with Matplotlib & LaTeX for representation.

## Voluntary Work, & Interests

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### Scouting Ireland 1st Dublin L.H.O.

- Beaver Scout Leader, Rover Scout, Council Member, Treasurer & Quartermaster.
- Organised multiple trips including hikes, camps and over-night hikes including contingency plans.

### Interests

- Completion of Google Digital Garage courses covering IT infrastructure & multiple programming languages.
- Use of Code Wars and HackerRank to continually upskill my programming abilities.
- Avid reader of computer science books to increase my IT knowledge and skills.
- Member of DCU Weightlifting Club.
- Irish rugby fan.

### References

Available on request.