Antonius Torode

https://torodean.github.io

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Exceptionally well organized and resourceful professional with more than 5 years experience, with a solid academic background and excellent analytical and problem solving skills, able to handle multiple projects while producing high quality work. Experienced in software development and a strong working knowledge of algorithms and data structures.

Skills Summary

- Software Development
- Software Deployment
- Coding & Scripting
- GUI Design
- Debugging
- Web Development
- Encryption Algorithms
- Mathematics
- Technical Documentation
- End User Documentation
- Software Testing
- Server Management

Computer and Technology Summary

Programming C++, C#, PYTHON, PHP, JAVA, GIT, BASH, ROOT, GEANT4, HTML, CSS, CAD, LaTeX, LabVIEW, Qt, Cygwin, Makefiles, Mathematica

Systems Microsoft Windows (all), Linux, Mac OS, UNIX

Software DS9, Stellarium, OpenOffice products, Microsoft Office Suite, Adobe (Premiere Pro, Illustrator, Photoshop, After Effects), Sony Vegas, Final Cut Studio

Experience

2017–2018 **Undergraduate Research Assistant**, National Superconducting Cyclotron Laboratory, East Lansing MI.

- I worked in experimental nuclear astrophysics.
- My primary focus was with scintillator detectors and experimental setups to better understand nucleosynthesis. This involved designing, building, and testing detector systems and collecting data using photomultiplier tubes and the NSCL DAQ system.
- I also performed calculations and simulations written in PYTHON and C++ for determining existing detector properties and new detector properties.

Summer 2018 **LabVIEW Programmer**, Michigan State University, East Lansing MI.

- Programming of experimental data acquisition systems for an advanced lab class at MSU for quantum physics (optical pumping) and superfluidity experiments by integrating National Instruments I/O devices to a computer system.
- Created accurate documentation for future developers and users of the LabVIEW programs.

2016–2018 **Physics and Astronomy Computing Assistant**, Michigan State University, East Lansing MI.

- I worked to manage and maintain the computers and networks for multiple departments at MSU.
- My responsibilities included fixing any computer related problems that may arise while maintaining or improving efficiency within the department. These included problems such as setting up new experimental camera systems, restoring corrupted operating system files, recovering lost data, replacing damaged hardware, troubleshooting malfunctioning software and more.

Summer 2016 **Physics Teaching Assistant**, Michigan State University, East Lansing MI.

- A tutor and exam proctor for PHY 232C, an online course taught at MSU.
- Assisting students in the understanding of concepts and problems via online and in person.

2013–2015 **CRLA Certified Math, Physics and Chemistry Tutor**, Oakland Community College, Auburn Hills MI.

- Tutor for fundamental concepts and ideas of mathematics, physics and chemistry.

Summer 2013 **Condensed Matter Physics Researcher**, Oakland University, Auburn Hills MI.

- Extensively studied Raman spectroscopy and graphite/graphene under high pressures.
- Performed a Raman spectroscopy experiment on graphene using a diamond anvil cell.
- Personally designed and set up resistivity experiments to confirm findings.
- Presented research in a professional and comprehensive manner in front of an audience.

2011–2013 **Data Research Analyst**, CLRS, inc., Southfield MI.

- Performed Data analysis of different financial markets such as the GM commercial car market.
- In depth research of Las Vegas casino populations.
- Analyzed business functionality and efficiency and improved upon them by shortening data verification process.

2010–Present **d0sag3-Films**, Home Business.

- d0sag3-Films is a video editing and graphic design title I created.
- Paid projects for Detroit In Focus but also many personal projects.
- Many of my projects can be viewed at https://torodean.github.io/D3F.

Peer Reviewed Publications

Jan 2018 "Software Development to Determine the Optimal Parameters of a Tape Transport System." Student Journal of Physics - International Version - Vol. 7. No. 1. Jan-March 2018 - Indian Association of Physics Teachers.

Jun 2017 "Exploration of the Quantum Casimir Effect." Student Journal of Physics - International Version - Vol. 6. No. 2. April-June 2017 - Indian Association of Physics Teachers.

Other Publications and Projects

2018 "Multiple Integrated Applications (MIA)." Program created for further development of application design. Contains mathematical functions, encryption algorithms, key code simulations, a comprehensive workout generation system, and more.

Oct 2017 "Characterizing a Tape Station and Beta Detector For Radioactive Isotope Beam Experiments." Conference Poster presented at the Fall Meeting of the Division of Nuclear Physics of the American Physical Society

2017 "Generations of Nuclear Activity (GINA)." Program created for performing nuclear decay calculations for a new radioactive transport system at the NSCL.

2017 "Local Operations Listing Agent (LOLA)." Program created for improved efficiency and computer database management at MSU.

Nov 2016 "Antonius' Handbook." Comprehensive reference of useful formulas, constants, units and definitions. Self Published: Free book download for current version. https://torodean.github.io/AHandbook.html

Education

2018–2019 **Degree in Biblical Studies**, *Ambassador Bible College*, Milford OH.
Religious studies pertaining to the history and contents of the Bible and other religions.

2015–2018 **B.S., Physics, Mathematics (Dual Majors)**, *Michigan State University*, East Lansing MI.
Graduated with an undergraduate physics degree and mathematics degree.

2011–2014 **Undergraduate Studies**, *Oakland Community College*.
General studies as well as math/sciences up to and including Calculus III, Differential Equations, Engineering Physics II and General Chemistry II (4.0 in all).