

# TREVOR GAMBLIN

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## EXPERIENCE

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### **Junior Electronics Engineer**                      **Pleiades Robotics**                      **May 2014 to December 2014**

- Designed and verified production-ready multi-layer PCBs using Cadence OrCAD design suite, refactoring board layouts to improve RF signal quality, and to reduce weight and size
- Optimized component library on the order of 1000s of unique entries, reducing manufacturing costs by eliminating redundant parts
- Developed flight trajectories for ROS-based quadcopter simulator in Python
- Characterized range-finding sensors to determine operational limits, and integrated stereoscopic camera for depth-mapping and 3D video capture

### **Research Assistant**                      **SPARC, Mount Allison University**                      **May 2012 to August 2012**

- Designed solar-powered astronomical data analysis system for tracking meteor showers
- Investigated damage risks tied to orbital debris through laser ablation and system modelling project

### **Research Assistant**                      **Materials Laboratory, MTA**                      **May 2011 to August 2011**

- Constructed AC-to-DC power supply to power stepper motors and motor controllers in precision laser alignment project, and used AutoCAD student suite for housing design
- Designed fluid flow control system for proper circulation and disposal of corrosive solutions

## EDUCATION

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### **Sackville, NB**                      **Mount Allison University**                      **September 2009 – May 2014**

- Major in Physics with minor in Computer Science
- Coursework: Digital Signal Processing and Electronics, Analog Signal Processing and Electronics, Classical Mechanics, Methods of Mathematical Physics, Thermodynamics, Electricity and Magnetism, Physics of Energy Production and Transfer, Astrophysics, Systems Programming, Data Structures and Algorithms I/II, Numerical Analysis, Differential Equations I/II, Advanced Linear Algebra

### **Online Course**                      **NASA/Saylor.org**                      **February – March 2014**

- Survey of Systems Engineering I
- Course detailing the role of systems engineers and best practices in project life cycle, requirements analysis, project management and failure mitigation with a focus on space missions and NASA case studies

## PROJECTS

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**Solar System Simulator (2015-):** Modular, easy-to-use simulator featuring real-world accuracy, written in C++ with OpenGL and SDL. Based off of Ryan Pridgeon's simulator (<http://ryanpridgeon.net/>)

**Touche (2015):** Python script for Linux that automatically inserts licenses and author signatures at file creation

**LibraryManager (2014-):** Lightweight C++ tool used for tracking textbook and novel completion

**Fractal Galaxy (2006-):** Science-fiction setting continuously developed for use in gaming and writing, intended to explore the future of technology, space travel and culture, as well as consequences of each

## LANGUAGES AND TOOLS

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- C, C++, Python, Bash, Javascript, HTML/CSS, XML, Java, C#
- Cadence OrCAD, Altium Designer, Visual Studio, Eclipse, Atmel Studio, IAR Embedded Workbench, LTSpice, ImageJ, R, AutoCAD, GDB, Valgrind, Git (<https://github.com/digwiz>)