Gregory Lemieux

Computational Engineer

http://glemieux.github.io gregory.lemieux@gmail.com 1.510.847.6519
glemieux

I'm an engineer with a passion for developing scientfic software applications to help solve some of the most pressing problems our world faces. My particular interest lies in applied optimization problems and towards this end I am pursuing a graduate degree, part-time, with a focus on Computational Engineering. I have a broad technical background developed through work in both academic and industrial organizations, providing both research-oriented and commericially-focused products and services. As such, I am extremely comfortable communicating within a variety of environments and have a proven ability to adapt to changing responsibilities based on evolving project requirements.

SKILLS

Scientific Programming
matlab/simulink julia numpy

Source Control
git subversion

Documentation
markdown tex pandoc

Productivity
vscode jupyter vim

Operating Systems
linux macos windows

WORK EXPERIENCE (4)

Systems Engineering Specialist at SSL **April 2012- Current**
http://sslmda.com

- Developing next-generation orbit simulation code for controls design and Vehicle Hardware Lab usage.
- Responsible for the next-generation on-board flight software orbit estimation Kalman filter.
- Implementing Matlab/Simulink autocode generation to help streamline flight software build efforts
- TEA code discussion
- Package management code build discussion
- Founding member of the Guidance, Navigation and Control Software Development Working Group.
- Provide more details about the above. Talk about standard recommendation.
- Produced mission analysis tools for the NASA Restore-L to help guide hardware subsystems decision-making.
- Detail this a bit more to focus on how this compares to old tools
- Also flesh out star tracker location/orientation optimization against mission requirements
- Figure out what to talk about with regard to Mission Planner and OD role

Research and Development Engineer at Space Science Laboratory **June 2008- April 2012**
http://www.ssl.berkeley.edu/

- Developed science data accumulation forecasting tool to aid in real-time planning for mission critical science collection.
- Integrated DSN Service Scheduling Software into active mission operation scheduling process.
- Scheduled ARTEMIS mission supports including critical Lunar Orbit Insertion.
- Contributed to the Deep Space Network Scheduling Advisory and Mid-range Management Groups to prepare for deployment of next-generation scheduling process.

Opto-mechanical Engineer at Janos Technology **December 2003- May 2006**
http://www.janostech.com/

- Designed infrared lens assemblies for commercial, defense, and research applications.
- Represented the engineering department as a member of the company-wide Quality Control Committee seeking AS9100 compliance.

Mechanical Engineer at Center for Space Physics **September 2001- June 2003**
https://www.bu.edu/csp/

- Designed and developed the vacuum-sealed opto-mechanical assembly for the main science payload for the SPIDR NASA mission proposal.

VOLUNTEER

Social Media Team at UUCB
July 2018 - Current

https://uucb.org

Administrative member of the church Social Media Team responsible for training and technical support to the church program groups.

Safety Implimentation Team at UUCB
September 2017 - Current

http://uucb.org

Responsible for educating all church program groups on the Safety Plan requirements.

- Trained Family Ministry and Religious Education volunteers on emergency evacuation procedures.

EDUCATION (2)

M.S. Interdiscplinary Engineering at Purdue University
2016 - Current

B.S. Aerospace Engineering at Boston University
1997 - 2002

AWARDS

Asterism Award at SSL
2015

Peer-to-peer recognition for developing and delivering introductory training material for new orbit dynamics group employees.

Apogee Award at SSL
2013

Received for contributions to a 2013 NASA Institute for Advanced Concepts (NIAC) proposal for a deep space communications architecture concept.

ARTEMIS Project Recognition at Space Sciences Laboratory
2010

For contributions to the Lissajous and Lunar Orbit Phases.

PUBLICATIONS

SSL Commercial Geosynchronous Spacecraft Orbit Raising Considerations
1 January 2016

Presents analysis results for a survey of all SSL launches since the 1990s.

THEMIS Mission Networks Expansion
1 January 2010

Discusses the results and experiences integrating the Deep Space Network software and processes for the ARTEMIS mission extension.