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[Joedang.github.io](https://Joedang.github.io)

## ASDF EDUCATION

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- Portland State University **Sep. 2013 – Jun. 2016**  
**B.S. Mechanical Engineering**, Maseeh College of Engineering and Computer Science  
**B.S. Physics**, College of Liberal Arts and Sciences  
3.65 GPA
- Portland Community College **Sep. 2008 – Jun. 2010, Sep. 2011 – Sep. 2013**  
3.0 GPA

## LANGUAGES AND TECHNOLOGIES

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- R, MATLAB, C++, Python, Bash, Vim, Git, SolidWorks, Abaqus, AutoCAD, GIMP, Inkscape
- $\text{\LaTeX}$ , Microsoft Office, Libre Office, Google Docs, etc.
- Ubuntu, Windows

## PROJECTS AND AWARDS

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- Director of Airframe Design and Manufacture **Dec. 2015 – present**  
[Created an open-hardware carbon fiber rocket airframe](#) for the [Portland State Aerospace Society](#)  
Managed interdisciplinary projects among students and professionals  
Published and presented [a conference paper on the project for AIAA SPACE 2016](#)  
Extensively documented design and manufacturing processes and fostered institutional knowledge
- PCC Art Beat competition **May 2012**  
Composed and conducted an original piece for about 30 members  
Earned 1<sup>st</sup> place in the composition competition

## RELEVANT PROJECTS

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In addition to the projects below, you can check out the rest of my portfolio at [github.com/Joedang/Portfolio](https://github.com/Joedang/Portfolio).

- OpenFOAM analysis  
A simulation of supersonic flow around the nosecone of PSAS' new rocket, used to inform its design and estimate aerodynamic heating.
- Restricted 3-body simulation [github.com/Joedang/restricted\\_three\\_body\\_problem](https://github.com/Joedang/restricted_three_body_problem)  
An R script for investigating the motion of satellites within planet-moon systems.
- Ballistic trajectory simulation [github.com/Joedang/Portfolio/tree/master/projectile](https://github.com/Joedang/Portfolio/tree/master/projectile)  
Realistic scenarios of short-range ballistic motion of various projectiles on different planets, accounting for buoyancy, drag, centrifugal, and Coriolis effects.
- N-body simulation [github.com/Joedang/Portfolio/tree/master/MATLAB\\_orbits](https://github.com/Joedang/Portfolio/tree/master/MATLAB_orbits)  
Various scenarios involving an arbitrary number of charged massive particles.