

Phillip R. Jenks
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Education:

- University of Arizona – M.S. Physics, August 2013, GPA: 3.8
- New Mexico Institute of Mining and Technology (NMT) –B.S. Physics w/ Astrophysics option; Minor Mathematics, May 2010, GPA: 4.0

Skills:

Math/Science: ODEs, PDEs, Linear Algebra, Vector Calculus, Probability, Physics, Computational Physics

Languages: Proficient with C++, Javascript, Python, HTML, CSS, Less, React. Familiar with NodeJs/NPM, C#, Java.

Tools/APIs: GIT, SVN, Trello, Sifter. Familiar with OpenGL, SDL, Visual Studio, XCode, Unity 5.

Employment/Research Experience:

Software Engineer (Contract) – Factus Games (June 2016 – Present)

- Post-release support for the WWI strategy game *Making History: The Great War* and engineering support for gameplay features on an unannounced product.

Software Engineer – Muzzy Lane Software (August 2014 – April 2016)

- Lead Engineer: *Making History: The Great War*. Finished feature/system implementations. Improved and expanded upon the military and economic AI. Implemented new systems for post-release DLC.
- Built custom web-based games and authoring tools for use through Muzzy Lane's Author platform.
- Wrote and implemented custom simulation logic to create game scenarios as per customer needs.
- Ported front-end UI logic from Muzzy Lane's in house game engine to Unity 5.

Research Assistant - University of Arizona (Spring 2011 – August 2013)

- Performed Radiation Hydrodynamic simulations of accretion disks around black holes.
- Adapted and debugged the massively parallel multi-physics hydrodynamics code Zeus-MP.
- Performed calculations on several clusters including the Steele cluster at Purdue, PDC's Lindgren cluster at KTH, and the Grendel cluster at Steward Observatory.
- Applied for and was awarded 800,000 compute hours with the Extreme Science and Engineering Discovery Environment (XSEDE) collaboration.

Teaching Assistant – University of Arizona (Fall 2010, Spring 2011, Spring 2013)

- Taught a total of 9 sections (3 per semester) of Phys 181L; beginning mechanics for non-majors.
- Workload included grading, lecturing, lecture and lab preparation, demonstrations, office hours, and tutoring room hours.

Instrument Development – Magdalena Ridge Observatory (Summer 2009 – May 2010)

- Developed an all-sky camera system for weather monitoring on Magdalena Ridge.
- Developed system for automatic archival of camera footage and a UI for controlling camera settings.

Projects:

In addition to my professional work, I have many personal projects based on my interests in game programming and simulation. These include a 2D turn based strategy game, a gravity based N-particle simulation tool, and a tech demo based off of a 2D shooter. Most of my game projects were written using a set of tools that I call Oracle. Oracle is written in C++ and based off of SDL/OpenGL and provides higher level access to the rendering capabilities of SDL/OpenGL, support for custom shaders, simple UI, particles, and simple collision. More details are available on my website at www.physics.arizona.edu/~pjenks/portfolio.

Honors/Activities/Acknowledgements:

Research Assistance Acknowledged in:

Jonathan R. Brown, John D. McCoy, & Douglas B. Adolf 2009, "Driven Simulations of the Dynamic Heat Capacity", *J. Chem. Phys.*, 131

Laura de Sousa Oliveira & P. Alex Greaney 2013, "Mapping thermal resistance around vacancy defects in graphite", *MRS Proceedings*, Vol. 1543

NMT Student Honor Award recipient and Scholar: Spring 2008 – Graduation

Society of Physics Students: Member