

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:

*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, Unreal Engine 4.  
*Math/Science:* ODEs, PDEs, Linear Algebra, Vector Calculus, Probability, Physics, Computational Physics

### Employment/Research Experience:

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

- Lead Engineer for the WW2 strategy game *Making History: The Second World War* and *Making History: The Great War Gold*. Implemented new gameplay features and UI, reworked existing TCP networking to use Steam's P2P networking API for P2P multiplayer support, profiling and optimization, implemented new internal game stats API for tracking in-game statistics, reworked AI for new gameplay and features
- Post-release support for the WWI strategy game *Making History: The Great War*.

#### *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. More details are available on my website at [pjenksportfolio.com](http://pjenksportfolio.com).

### 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*