

Patrick Heney

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PatrickHeney.com

SUMMARY

Unity Certified Developer. Game development generalist with broad skill-set and many areas of expertise. Experience spans game development, game design, 3d content creation, project management, database, application development.

- Unity3D, Visual Studio, Autodesk Maya, Cinema4D, 3DS Max, Blender, GIMP, Photoshop, Google SketchUp
- C#, JavaScript, jQuery, ProcessingJS, Java, Android, HTML5, CSS, SQL
- Agile / Scrum, Test Driven Development (TDD), Object Oriented Analysis-Design-Programming (OOA / OOD / OOP), Entity-Component, Functional Programming

GAME DEVELOPMENT ([PORTFOLIO & DEMOS](#))

- Redshift [PLAY](#) Arcade shooter influenced by Centipede, Galaga and Rayden ([Demo Video](#))
- Race Forever [PLAY](#) 3rd person infinite-runner / racer
- Asteroids [PLAY](#) Clone of the arcade action game by Atari
- Weather [TRY IT](#) Switch between rain, snow, overcast and clear
- Tasking [TRY IT](#) Character control system similar to The Sims by Electronic Arts
- Dialogue [TRY IT](#) Typical in most RPG's
- Farm [TRY IT](#) Common to appointment-mechanic games, such as Farmville by Zynga
- Inventory [TRY IT](#) Common to most RPG's
- **Other Projects:** Infinite Side-Scrolling Platformer, First Person Shooters, Turret Defense, Sliding-Tile Puzzle, Missile Command, SMS Multi-player Trivia, Particle Effects, Procedural Effects, High-score database for thebreathingzone.org
- **Technologies:** C#, Unity, Android, Java, JavaScript, Python, SQL, MySQL, jQuery, ProcessingJS, Google APIs, RSS, NUnit, Autodesk Maya, Cinema4D, 3DS Max, GIMP

EXPERIENCE

Software Developer, Bell County, Belton, Texas

Feb 2014 – present

- Improved management efficiency of the District Attorney, victim support services, Police Narcotics K9 unit, and Judges
- Mentor junior developers and interns to sharpen development skills, build experience, and develop good coding practices
- **Applications:** Judge Magistrate Administration, Sheriff Citation, K9 Training, District Attorney Case Management, County Attorney Case Management, County Fleet Management, Civil Service Papers, Judge Inquest System, DA Case Intake Previewer, Building & Grounds trouble-ticket system, database documentation templates
- **Technologies:** Dot NET (C#, SQL, HTML5, CSS, JavaScript), SQL Server, Reporting Services, jQuery, Bootstrap, XML, MVC, Entity Framework, UI Frameworks, Visual Studio Unit Test Framework

Game Developer, Freelance, Temple, Texas

Feb 2008 – May 2014

- Design and implement game systems to maximize player engagement, retention and conversion
- Design behavior loops, core-mechanics, reward schedules, on-boarding and the meta-game
- Create robust game design and progression that leverages statistical models, combinatorics and probability theory
- Optimize player experience using statistical ANOVA, factorial analysis, response surface methodology, and player metrics

Simulations Engineer / Analyst, Defense Contractor (various employers), Fort Hood, Texas

Feb 2008 – May 2013

Research Analysis and Maintenance (Dec 2012 – May 2013), Alion (Sep 2008 – Dec 2012), Alatec (Feb 2008 – Sep 2008)

- Provide simulation integration and development support for test and evaluation of C2 and surveillance systems
- Technologies: Java, Linux, CISCO IOS, military simulation systems, military communication systems, tactical networks

EDUCATION

Master of Science, Computer Science & Industrial Engineering, Purdue, IN 2019

Unity Certified Developer, Unity Technologies, Austin, TX 2016

Bachelor of Arts, Media Communication (Minor: Computer Science), Virginia Polytechnic and State University, Blacksburg, VA 1997

Certificate of Advanced Studies in Character Animation, AnimationMentor, Berkeley, CA 2008

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CONTINUING EDUCATION

Industrial Applications of Statistics	Purdue	2016
Discrete Optimization	University of Melbourne	2015
Model Thinking	University of Michigan	2015
Advanced Competitive Strategy	Ludwig-Maximilians-Universität München (LMU)	2015
Competitive Strategy	Ludwig-Maximilians-Universität München (LMU)	2015
Advanced JavaScript: Natural Simulations	Khan Academy	2015
Advanced JavaScript: Games & Visualizations	Khan Academy	2015
Intro to JavaScript: Drawing & Animation	Khan Academy	2015
AngularJS	Codecademy	2015
jQuery	Codecademy	2015
HTML & CSS	Codecademy	2015
Python	Codecademy	2015
PHP	Codecademy	2014
JavaScript	Codecademy	2014
Pattern-Oriented Software Architectures: Programming		
Mobile Services for Android Handheld Systems	Vanderbilt University	2014
Economic Decisions in Engineering	Purdue	2013
Creative, Serious and Playful Science of Android Apps	University of Illinois at Urbana-Champaign	2013
Web Programming Curriculum (12 courses)	CourseHero	2013
Business Leadership	CourseHero	2013
Introduction to Operations Management	University of Pennsylvania	2013
Introduction to the Principles of Management	Georgia Tech	2013
Game Design	MIT	2013
HTML5 Game Development	Google	2013
Building a Search Engine	Udacity	2013
Machine Learning	Stanford Engineering Initiative	2012
Introduction to Artificial Intelligence	Stanford Engineering Initiative	2012
Simulation Development (OneSAF v5.5)	PEO STRI, Orlando, FL	2012
Web development technologies (5 courses)	SkillSoft	2012
Gamification	University of Pennsylvania	2012
Building Mobile Applications	Harvard Extension School	2012
Simulation Development (OneSAF v2.3)	PEO STRI, Orlando, FL	2010
Psychology of Physical 3D Animation	AnimationMentor, CA	2009
Routing and Cisco Networking (17 courses)	SkillSoft	2010
Flash development (7 courses)	SkillSoft	2010
Information Security (17 courses)	SkillSoft	2009
Java development (13 courses)	SkillSoft	2009
Simulation Operation (OneSAF)	PEO STRI, Fort Sam Houston, TX	2008
Advanced Studies in Character Animation	AnimationMentor, CA	2008
Polishing and Portfolio		2008
Advanced Acting		2008
Introduction to Acting		2007
Advanced Body Mechanics		2007
Body Mechanics		2007
Animation Basics		2006
Animation Fundamentals	Digital Tutors	2007
Maya Fundamentals	3D Buzz	2006