Kenneth E. Bellock

CONTACT INFORMATION

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SUMMARY OF QUALIFICATIONS

- **Platforms**: Linux, Windows, and Android
- **Languages**: Python, C, C++, Z-Shell, C-Shell, K-Shell, Bash, Perl, FORTRAN, MATLAB, Simulink, Java, and LaTeX
- **Tools**: Microsoft Office, Microsoft Project, Docker, Jira, Confluence, FishEye, Jenkins, BuildBot, Gerrit, RobotFramework, MATLAB, Simulink, Open Office, AutoDesk Inventor, Mathematica, Adobe Framemaker, Git, Mercurial, ArcGIS Pro, ClearCase, ClearDTTS, ClearQuest, Rose, RazorTool, RTS, Synergy, TeamView, TeamCenter Systems Engineering, ICE Windchill, Subversion, WindRiver Workbench, Eclipse, Visual Studio, Numpy, SciPy, Matplotlib, SCons, CMake, Make, and TRICK
- **Concepts**: Systems Engineering, Project Management, Issue Management, Configuration Management, Version Control, Build Systems, Modeling and Simulation, Unified Modeling Language (UML), Object Oriented Programming (OOP), Graphical User Interface (GUI) Design, Distributive Programming, Continuous Integration, Peer Review, and Embedded Software
- **Clearance**: Active Secret, Interim Top Secret

PROFESSIONAL EXPERIENCE

Systems Engineering Group (SEG) Inc., Columbia, Maryland USA

Integrated Product Team Lead (IPTL) **September, 2016 - Present**

- Produced and presented schedules, metrics, and team status to the project and program managers during bi-weekly leads meetings.
- Responsible for product packaging, delivery, and quality assurance.
- Designed and implemented a solution for embedding dynamic quality assurance mechanisms on deliverables to evaluate product quality on customer platforms.
- Designed and implemented a solution for distributed issue tracking across teams working at multiple isolated development centers.
- Managed a team of modeling and simulation engineers supporting modeling and simulation architecture, support tooling, and testing.
- Supported simulation architecture and tooling for threat characterization packages utilized in test beds and in support of threat analysis and engineering.

Project Manager - PyMap **April, 2017 - October, 2017**

- Developed a statement of work, use cases, and requirements defining the design and implementation of a scripting module for visualization of geographic information systems supporting threat engineering.
- Managed team of software developers and interns supporting development, test, documentation, and deployment.
- Implemented version control, configuration management, and quality assurance of product deliverables, documentation, and source code.

Senior Simulation Software Engineer **January, 2013 - September, 2016**

- Responsible for the design and development of a system to build, test, package, and deploy enterprise level software products.
- Responsible for the design, development and maintenance of 6 Degrees of Freedom (DOF) simulations used in threat analysis supporting United States Missile Defense Agency interests.
- Managed resources and project schedules to support on time, error free product deliveries.
- Implemented company wide improvements to knowledge capture infrastructure, quality assurance and artifact management.
- Deployed company wide services of Atlassian products including Jira, Confluence, and FishEye.

Honeywell International/Manpower Professional, Houston, Texas USA

Senior Advanced Software Engineer (Orion - Test) **February, 2012 - December, 2012**

- Responsible for the Design and Development of an automated integration test environment.
- Authored a suite of custom tools used to track test coverage from use cases, through formal requirements, down to derived design requirements, and their unit tests.

Senior Advanced Software Engineer (Orion - Entry Mode Team) **May, 2012 - August, 2012**

- Launch Recovery Systems Analyst supporting parachute model development and analysis.

Senior Advanced Software Engineer (Orion - Navigation) **May, 2011 - December, 2012**

- Navigation Analyst supporting Simulink model refactoring, algorithm reviews, model reviews, white box testing, and responsible for supplying customer support required to realize scheduled baseline release dates.
- Responsible for navigation systems development support including Coarse Align, Fine Align, Kalman Filtering, Inertial Navigation, Filtered GPS Navigation, and navigation decision control logic.

Senior Advanced Software Engineer (P1000 Autopilot) **September, 2011 - January, 2012**

- Supported engineering analysis and simulink refactoring of the IC-600 Automatic Flight Control System for the Embraer ERJ-145 program.

Linux System Administrator **June, 2011 - December, 2012**

- Responsible for maintaining a cluster of Linux workstations dedicated to flight software design and analysis. This included system maintenance, troubleshooting, and performing baseline builds of simulation software.

Project Manager **April, 2011 - June, 2011**

- Responsible for managing assets, software states and testing metrics for the System Integration Bench (SIB) supporting the Honeywell Ovation Select product line.

Senior Advanced Software Engineer (Military Contract) **December, 2010 - April, 2011**

- Responsible for the generation, execution, and documentation of requirements based test cases on embedded software in support of Brigade Combat Team Modernization (BCTM).
- Composed ambiguity and testability analyses on assigned functional areas of the project's software requirements specification.
- Designed requirements for and developed an automated test framework for black box testing of an embedded software target.

Bellock Ventures, Houston, Texas USA

Android Application Developer **October, 2010 - Present**

- Published titles on the Android Market include Angle Finder and Angle Finder Pro.
- Currently over 50,000 users of the Angle Finder Android application.

United Space Alliance, Houston, Texas USA

Antares Simulation Developer **November, 2009 - October, 2010**

- Provided support to the Johnson Space Center Ascent Abort Simulation Team by performing software development and testing support on the Advanced NASA Technology Architecture for Exploration Studies (ANTARES). ANTARES is NASA's 6-Degree of Freedom (DOF) simulator for Orion. It is built using the Trick simulation toolkit and developed in C++ for a Linux platform distribution.

Shuttle Abort Software Principle Engineer **June, 2002 - October, 2010**

- Served as the certified Space Shuttle Abort Analysis and Product Design Software PE on the Ascent/Descent Flight Design Software Screening Panel (SSP).
- Managed the Equipment Replacement 3rd Generation (ER3) Project for Space Shuttle Abort Analysis and Product Design Software Suite. This project encompassed the scheduling, documentation, coding, and testing necessary to transition the software suite from an AIX to a Linux platform. This was a two year project that was completed three months ahead of schedule.
- Responsible for process improvement initiatives including improving the turn-around time required for the Space Shuttle Abort discipline software lifecycle, automating configuration management software handover procedures, and by preparing and maintaining software integration metrics across flight design working groups.
- Managed the Abort Design Environment re-invention project, a three year effort to streamline the operations software suite for Shuttle abort design in support of Just in Time Flight Design (JITFD).
- Responsible for 3-DOF and 6-DOF simulation tool maintenance and the authoring of custom analysis software tools which interfaced with these simulators to design and verify Space Shuttle ascent trajectories in support of Guidance, Navigation, and Control.

TransDimensional Entertainment Inc., Houston, Texas USA

Lead Game Designer **January, 2001 - September, 2004**

- Designed and developed an entirely original physics engine in C++ utilizing real time accurate collision detection, multi-body dynamics, and inverse kinematics systems for character animation for the Microsoft Xbox platform.

Education

The Pennsylvania State University, University Park, Pennsylvania USA

B.S., Physics, August, 2000
B.S., Mathematics, August, 2000

- President of The Pennsylvania State University Chapter of Sigma Pi Sigma (ΣΠΣ), The National Honors Society of Physics Students.

Harrisburg Area Community College, Harrisburg, Pennsylvania USA

A.S., Physics and Science Education, May, 1997