

Aaron A. Klapheck
Aaron.A.Klapheck@gmail.com

OBJECTIVE

Seeking a career position in mechanical systems design.

WORK EXPERIENCE

- Mechanical Engineer** *Design Branch, US Army Corps of Engineers* Jan 2010 – Current
Exposed to a wide variety of military construction projects from low-rise buildings to underground tunnels. Project Delivery Team (PDT) member for six projects, Design Reviewer for three projects, and performed other design/estimating/evaluation work for five projects. Projects located in California, Nevada, Utah, and Arizona.
- Easily managed multiple projects by creatively utilizing a geographic information system software tool.
 - Mechanical, Plumbing, and Fire Protection Designer for \$13.8 million building construction contract.
 - Modeled an entire building utilizing energy analysis software leading to a LEED Silver Certification.
 - Used AutoCAD to produce contract drawings adhering to UFC, ASHRAE, IPC, and NFPA codes and guidelines.
 - Drafted construction specifications, design analysis, requests for proposal, and cost estimates.
 - Utilized Excel, Visual Basic, and Mathcad to perform detailed design analysis for numerous building systems.
 - Designed control systems involving control diagrams, sequence of operations, and equipment layout.
- Construction QA Representative** *Resident Office, US Army Corps of Engineers* Jan 2011 – Jun 2011
Responsible for overseeing five construction contracts at Beale Air Force Base during six-month construction rotation. Duties included: reviewing contractor submittals, verifying that safety standards were being followed according to EM 385, and ensuring a high quality of work was being provided by comparing site work to contract drawings and design specifications. Resolved a year-long conflict involving three parties: the designer whose contract ended, the construction contractor whose timeline doubled, and the unsatisfied customer.
- Engineering Technician** *Design Branch, US Army Corps of Engineers* Oct 2009 – Dec 2009
Aided in the mechanical design of the Folsom Dam Auxiliary Spillway. Utilized knowledge of mechanics and dynamics to determine both linear and rotational relative motions of dam gates. Used fluid dynamic and thermodynamic principals to determine characteristics of hydraulic cylinders, supply lines, and pumps.
- Robotics Programmer** *Human Computer Interaction Group, NASA* Jun 2009 – Aug 2009
Learned Java, XML, and the planning software SPIFe; used this knowledge to create the program **PERIPS**. PERIPS reads an XML plan, developed in SPIFe, and uses this parsed plan to control a Personal Exploration Rover (PER). PERIPS required serialization, event-handling, and multithreading of over 30 interrelated objects which utilized the PER's motion, electromagnetic, and image processing capabilities.

LEADERSHIP & SKILLS

Eagle Scout Project – Boy Scouts of America

- Executed the project, which involved directing 19 Scouts to perform over 80 man-hours of labor.
- Negotiated with business managers from two different companies, who then donated supplies and money.

Professional Projects

- Researched, designed, programmed, tested, and published a controls/[data-acquisition interface](#).
- Designed, built, and programmed an [interactive robot](#), which was presented at a robotics expo.
- Design, program, and maintain an 80+ page website: www.aaronklapheck.com

Systems & Software

- AutoCAD ▪ SolidWorks ▪ MATLAB ▪ LabView ▪ Simulink ▪ TRANE Trace ▪ MathCAD ▪ Dreamweaver ▪ Nastran 4D ▪ Working Model ▪ JavaScript ▪ HTML/CSS/XML ▪ Java ▪ FileZilla ▪ Camp-G ▪ PBasic ▪ Spin
- Microsoft: Word ▪ Excel ▪ Visual Basic ▪ PowerPoint ▪ Outlook ▪ DOS ▪ Project ▪ Paint ▪ Windows XP ▪ Windows 7

EDUCATION

B.S., Mechanical Engineering – Dec 2009; California State University, Sacramento ▪ **GPA 3.89**

- Design team member on the [Hornet](#) hover toy. Hornet design listed in top 10 models of the week by [3dvia](#).
- Worked on a four-member team in a year-long [helicopter project](#).

ACHIEVEMENTS & ACTIVITIES

- Accredited Professional – Leader in Energy and Environmental Design (LEED)
- Engineer In Training – Passed the NCEES Fundamentals of Engineering Exam

December 10, 2011