Curriculum Vitae
Jeremy D. Castagno

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SUMMARY

I am a graduate of Chemical Engineering from Brigham Young University with minors in Computer Science and Mathematics. I recently worked for Valero Energy Corporation as a Process Control Engineer where I provided operation support and assisted capital projects. Prior to this I was an intern for Valero at their San Antonio headquarters analyzing and improving gasoline blending models. While I studied at BYU I worked part time as a Research Assistant for a group called PRISM or Process Research and Intelligent System Modelling (http://apm.byu.edu/prism). My research focused on real time model predictive control and parameter estimation. My area of expertise is modeling physical systems and developing robust control strategies.

RELATED EXPERIENCE

Valero Energy Corporation, Memphis, TN   May 2013- October 2015
Process Control Engineer
Daily control systems support for operation of multiple process units.
Reviewed and verified several safety systems through simulation and creation of detailed test plans.
Lead gasoline blending control system upgrade while incorporating advanced process control with an estimated savings of 2 MM/yr.
Systems administrator of workstations, servers, and firewalls for the Process Control Network.

Brigham Young University PRISM, Provo, UT   August 2012- April 2013
Research Assistant
Assisted graduate research and publication of Moving Horizon Parameter Estimation (MHE) of UAV's.
Developed and implemented real time mixed-integer nonlinear programming control of a laboratory benchmark system utilizing MATLAB.
Programmed an interface (C++) between MATLAB and a laboratory control system while documenting all features clearly.

Valero Energy Corporation, San Antonio, TX   April 2012- August 2012
Economics & Process Optimization Intern
Performed a thorough engineering statistical analysis of corporate gasoline blend models. These models are used in predicting gasoline properties and are executed in planning for several oil refineries.
Identified model weaknesses and implemented improvements resulting in a 50% increase in model accuracy.

Brigham Young University, Provo, UT   August 2010- August 2012
PC Windows Administrator
Managed over 400+ PC's and Servers
Programmed custom scripts and programs for software deployment
Assisted in user account creation and maintenance

EDUCATION

B.S Chemical Engineering   August 2006-April 2013
Brigham Young University
GPA: 3.73
Minors: Computer Science (GPA: 4.0), Mathematics (GPA: 3.85)

PROFESSIONAL SERVICE AND MEMBERSHIPS

International Society of Automaton Member (ISA)

COMMUNITY SERVICE

Cub Scout Den Leader, Memphis, TN   September 2013 – May 2015
Led young men on outings, rank advancement, and weekly meetings
Taught many lessons assisting character and intellectual development

Sunday School Teacher, Memphis, TN   September 2013 – Current
Educated young children in gospel lessons

Study Abroad Engineers Without Borders, Cusco, Peru & Provo, Utah   August 2011-May 2012
Organized a multi-discipline engineer team creating low cost water filters.
Designed, created, and distributed multiple engineering projects in rural villages.

Volunteer Representative, India   July 2008 – July 2010
Served as missionary for The Church of Jesus Christ of Latter-day Saints
Coordinated efforts of sixteen representatives as a leader

SKILLS

Operating Systems: Linux, Windows
Programming: C, C++, C#, JavaScript, Python, VBA
Web development: Meteor, Angular, React, HTML, CSS
Databases: MySQL, Oracle, SQL Server

INTERESTS

Exercise: Running, weightlifting, hiking, kayaking
Web Design/Apps: Websites, Android Apps

HONORS AND AWARDS

BYU Alvina Soffel Barrett Scholarship   2011 - 2013
BYU General Engineering Scholarship   2010 - 2011

PEER REVIEWED JOURNAL PUBLICATIONS

Sun, L., Castagno, J., Hedengren, J. D., and Beard, R. W., Parameter Estimation for Towed Cable Systems Using Moving Horizon Estimation, IEEE Transactions on Aerospace and Electronic Systems, Vol. 51, No. 2, April 2015.