

Hoday Stearns
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San Francisco Bay Area, California

EXPERIENCE

STAFF ENGINEER - HARD DISK SERVO WRITE

Western Digital Corporation, San Jose, CA

Aug. 2014 to present

- Developed, tested, and debugged firmware for servo pattern writing hard disk drives
- Developed new method for recording and reading repeatable runout correction for hard disk drive servo system
- Experience with: C/C++, lua, ARM, Matlab

RESEARCH ENGINEER - CLOUD ENERGY SYSTEMS

Panasonic Corporation, Energy Solutions Center, R&D Division, Osaka, Japan

Oct. 2011 to Dec. 2013

- Coded from scratch and tested the first version of our server software for controlling our cloud energy storage system
- Responsible for specification, design, coding, and testing of server-side software for control of cloud energy storage (battery) system
- Designed, coded and tested algorithm achieving 20% energy cost reduction for aggregation of energy storage resources
- Experience with: Java, Python, MySQL, Linux, version control (subversion), build and test tools (maven), profiling (VisualVM), writing driver for custom protocol over TCP/IP, network traffic analysis with Wireshark

GRADUATE STUDENT RESEARCHER - MOTION CONTROL

University of California, Berkeley, Mechanical Systems Control Laboratory

Fall 2006 to Spring 2011

- Researched high-precision motion control of a wafer scanner (semiconductor manufacturing robot)
- Developed and tested control algorithms for vibration suppression, learning, controller tuning
- Created models and did simulations with MATLAB and Simulink
- Experience with: laser interferometry, linear motors, encoders, LabVIEW real-time and FPGA, control software, PCB design (Eagle), mechanical design (Solidworks), machine shop, device drivers, SPI, I2C, RS-232, sensors, IMUs, accelerometers, navigation algorithms (Kalman filter), filtering, signal processing

TEST SYSTEMS DEVELOPMENT INTERN

Illumina Inc., Hayward, CA

Summer 2009

- Developed product reliability test system with sensors, data acquisition device, and LabVIEW program

MECHANICAL DESIGNER

University of California, Berkeley Robocup Team

Fall 2007

- Designed, machined, assembled parts for drive system for soccer robot

SKILLS

Java, Python, C/C++, Microcontrollers/ARM, HTML/CSS/Javascript/JQuery/Bootstrap/PHP/SQL, MATLAB, LabVIEW, SolidWorks, build tools, version control, control design, modeling, simulation, machine shop, technical communication, Japanese

EDUCATION

University of California, Berkeley

B.S. Mechanical Engineering, May 2006

Ph.D. Mechanical Engineering, May 2011

Focus: Control / Mechatronics, Minors: Optimization, math

RELEVANT COURSEWORK

Embedded Systems	Advanced Control Systems I,II	Mechatronics and Design
Artificial Intelligence	Digital Signal Processing	Data Structures