Mason Earl Nixon

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OBJECTIVE: To gain experience and understanding in robotics by obtaining a position with opportunities for hands on learning.

EDUCATION:

Auburn University at Montgomery - Spring '06 - Summer '08
Auburn University - B.S. Wireless & Electrical Engineering May '11
Georgia Institute of Technology - Fall 2011 – Present
Anticipating a M.S. in Electrical Engineering in Spring 2013.

ACHIEVEMENTS:

Auburn University at Montgomery –

- Academic Excellence Merit Scholarship 2007 to 2008
- Engineering Wifi Antenna Design Team Competition Winner
- Honored in recognition of Outstanding Research in Alternative Fuels
- **Dean's List** Spring 2006 to Spring 2008, **Final GPA: 3.89**

Auburn University -

- AU Board of Trustees Scholarship 2008 to 2009
- Bonnie H Arnall Endowed Scholarship 2008 to 2009
- National SMART Grant 2008 to 2010
- Class of 1908 Scholarship 2008 to 2009
- AT&T Foundation Scholarship 2008 to 2011 (out of 2700 applicants)
- Electrical Engineering Annual Faculty Scholarship 2010 to 2011
- Recipient of Cellnet Technology Annual Scholarship 2009 to 2010
- **Dean's List** Spring 2009 to Spring 2011, **Final GPA: 3.89**
- **Graduated Summa Cum Laude**
- **Honored with IEC Everitt Award for Student Excellence (2010-2011)**
- **Ranked first in Electrical Engineering Class of 2011**

General Achievements –

- Accepted the Department of Defense SMART Scholarship and Internship out of 1500 nationwide applicants (2009) and out of 2700 nationwide applicants (2011)

SPECIAL SKILLS: Skills obtained from either classes taken or work experience.

- Skilled and proficient in MATLAB 2009b with Simulink experience.
- Skilled with HCS12 Motorola Microcontroller assembly.
- Skilled with Atmel microcontrollers with Arduino bootloader.
- Extensive design work done with AutoCAD 2009.
- Experience and training in C++ and some experience with Visual C++ (.NET Framework).
- Proficient in designing with web languages such as HTML 4.0, JavaScript, Cascading Style Sheets, and XML.
- Adept with the 2007 Microsoft Office Suite (Word, Excel, PowerPoint).
- Able to type sixty words per minute.

EXPERIENCE (REMUNERATED):

- **Department of Defense (DoD)**

Space and Missile Defense Command (SMDC)
Concepts Analysis Lab (CAL) - May 2010 to August 2010
General Engineer Contractor – Designed and analyzed a free space optical data transmission system for a satellite-to-ground link. I worked on various other projects involving satellites and lasers. I also performed simulation and interpretation with MATLAB and Google Earth. This job requires a security clearance at the level of **SECRET** which was obtained in April 2010.
May 2011 to August 2011 – Aided in the design of a high-altitude balloon payload that acted as a simulated satellite. The payload included: Atmel microcontroller, GPS IC with helical antenna, temperature sensors, accelerometer, gyro, and a 900 MHz transceiver. I also operated and logged data from an interferometer radar that acted as the sole truth sensor in a field test of multiple radars in detecting rockets, artillery, and mortar.

- **M.C. Dean Inc. -** May 2009 to August 2009

Design Engineer Intern – Aided other Design Engineers in designing security and control access systems with extensive use of AutoCAD 2009. I revised projects to work with an infrastructure maintenance management system and helped design control access systems. I also performed quality control and revision of design submissions. It is notable that the projects that I handled and worked with contained sensitive information.

- **Alabama Department of Transportation (ALDOT)**

Materials and Tests Bureau Liquid Asphalt Lab –
August 2007 to August 2008
Professional Civil Engineer Trainee - Performance of a wide variety of liquid asphalt and plastics tests in addition to asphalt disposal. Tests involve use of equipment such as Dynamic Shear Rheometer, Brookfield Viscometer, Saybolt Viscometer, Ductilometer, etc. I also performed distillations of Pavon and various other emulsion types of asphalt. Also wrote lab contract proposals, test failure reports, and created lab floor plan.

EXPERIENCE (VOLUNTEER):

- **AUM Engineering Club -** January 2008 to August 2008

President & Co-founder - Began and oversaw team projects with teams of 5 or more on such tasks as the conversion and implementation of petroleum-burning vehicles into ethanol burning vehicles into the AUM fleet, biodiesel vehicle conversion, and campus wide recycling.

- **AU Student Projects and Research Committee (SPaRC) –**

January 2009 to Present
Project Manager – Delegated and aided a team of 12+ students in the design of chassis, drive systems, power systems, and control systems of an autonomous solar-powered robot for the IEEE Hardware Design competition. Notable experience gained on microcontrollers such as the Arduino, Motorola HCS12, and the PIC 16 bit. Also experience gained in construction of solar cell arrays and power systems. I also constructed and demonstrated a guitar effect clone.

HONOR SOCIETIES & OFFILIATIONS:

Innovative Humanitarian Products Organization – *Vice-President* Spring 2010 to Spring 2011
IEEE AU Student Branch – *Officer* Spring 2009 to Spring 2011
Eta Kappa Nu – *Officer* Fall 2009 to Spring 2011
Tau Beta Pi – *Officer* Spring 2010 to Spring 2011
National Society of Collegiate Scholars – Spring 2009 to Spring 2011
AU Engineering Council – *Representative* Fall 2009 to Spring 2011

REFERENCES:

Academic and/or professional references available upon request.