Steven C. Dang

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Education

Georgia Institute of Technology, Atlanta, GA
BS in Electrical Engineering, May 2007
Overall GPA: 3.52 Major GPA: 3.59

Carnegie Mellon University, Pittsburgh, PA
Masters in Edu.Technology and Learning Science
Expected August 2015

Skills

Education

- Research derived, Standards compliant, Goal-based curriculum design
- Applying modern cognitive science principles to curriculum and e-learning interface design
- E-learning interface design
- Robotics and Design education in primary school

Programming Languages and Technologies

- Python, Django, Sqlalchemy, Celery, RabbitMQ, Numpy, Scipy, Satchless, Django-Rest-Framework
- Java, J2BC, EJB, Apache CXF, Servlets
- Objective C, iOS Maps API
- HTML/CSS, Javascript, Jquery, Twitter Bootstrap, XML, WSDL

Data Analysis Algorithms

- Supervised and Unsupervised machine learning
- Non-linear Optimization using gradient descent, lagrange multipliers, duality methods
- Numerical Methods/Analysis: Polynomial Approximation/Interpolation, Floating Point Arithmetic

Automation

- Search-based AI, State Machines, and Behavior Based Control
- Computer Vision/Image processing, Document and Scene OCR

Work Experience

Univ of Maryland Institute for Advanced Computer Studies Lab, College Park, MD
Research Programmer *10/2012-Present*

- Used SWIG to create Python wrappers for various projects and OCR libraries
- Applied text detection algorithms to scenery images to automate creation of a text searchable geospatial index from images with incidental text
- created python library for custom batch processing on a linux cluster using Torque Resource Manager
- Used C++, C, Python, numpy, scipy, and openCV to develop new methods for text detection from unstructured scene images

SCDangIT, Germantown, MD
Freelance Programmer and IT consulting *05/2011-Present*

- Utilized Python/Django stack to create custom web solutions, and small business IT tools
- Implemented e-commerce system using Satchless framework for Django
- Linux system administration

Lockheed Martin: Integrated Systems & Global Solutions, Gaithersburg, MD
Human Terrain Internal R&D : Software/Systems Lead Engineer *5/2009-4/2011*

- Lead Architect for Service-oriented architecture for dismounted field operations
- Coordinated multiple teams from across disjoint parts of the corporation
- iOS App and webapp development with location based services and maps api

- WSDL-based web services for text-to-speech, biometrics, and geospatial queries.

Sensor Soldier Internal R&D: Lead Software/Systems Engineer *1/2008-4/2009*

- Lead electronics and firmware design and testing
- Developed next-generation heads-up display system for dismounted military operations
- Digital/analog circuit and PCB design utilizing high speed digital bus design and fpga bga packages.
- Altera FPGA programming using VHDL to create custom video processor

GeoINT Services Internal R&D: Software Engineer Associate *8/2007-12/2007*

- Developed EJB based solution for processing geospatial videos

NASA Ames Research Center: Intelligent Robotics Group, Mountain View, CA

Dark Navigation Lab: Intern Team Lead *6/2007-8/2007*

- Lead a team of three other interns to develop experiment methodologies and perform data collection and characterization in support of research activities
- Characterized 3D Infrared imaging camera and created an error model relating target distance, inclination, albedo, and internal camera parameters
- Applied image processing models and data to develop an algorithm to automate multi-sensor calibration

RoboJackets, Atlanta, GA

President & FIRST Team Co-lead *8/2003-5/2007*

- Managed the founding and development of Georgia Tech's first entry into the International Robocup League
- Created relationships with Georgia Tech faculty to discover advanced algorithms for use in competition robots
- Co-lead FIRST robotics program mentoring team, directly mentoring high school students in robotics in support of increasing interest in math, science, and engineering
- Conducted annual 12-week robotics course for 15 inner-city Atlanta high schools developing FIRST robotics teams
- Experimented with path planning, kinematics, computer vision, sensor-data fusion, and multi-agent coordination algorithms in support of competition robots

University of New Orleans: Summer Scholars Program, New Orleans, LA

Engineering Instructor *Summer 2004, 2005*

- Developed curriculum, lessons, and lab activities to introduce general engineering concepts and increase interest in engineering as a career using robotics as a focal topic
- Managed classes of up to 20 students in grades 9,10, and 11 from New Orleans Public Schools

Awards/Honors

Lockheed Martin Special Recognition Award *12/2008*

- Annual award presented to individuals recognized by upper level management for exceptional performance

Georgia Tech President's Scholarship *5/2003*

- 4-year Merit-based scholarship to Georgia Tech: top 100 out of 4300, based on academics, and depth of extracurricular involvement.

Other Activities

Evolve Academy Muay Thai Team,Gaithersburg, MD

Muay Thai Coach *10/2007-Present*