

TREVOR J. GOODYEAR

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OBJECTIVE

A position that provides hard problems that can be solved through the application of my programming, computer engineering, mathematics, and information technology knowledge.

EDUCATION

Bachelor of Science, Computer Engineering Armstrong Atlantic State University
Savannah, GA Aug 2009 — Present
Courses in Java, C++, MATLAB, VHDL; signal processing, digital prototyping, physics.

Certificate, Cisco Networking Specialist Gwinnett Technical Institute
Lawrenceville, GA Aug 2008 — May 2009
Attended local technical college during senior year of high school. Courses in LAN and WAN theory and application. Used Cisco IOS to configure routers and switches. A+ Certification.

Dual Diploma, College Preparatory / Technical Grayson High School
Loganville, GA Aug 2005 — May 2009

EMPLOYMENT EXPERIENCE

Computer Science Intern Skidaway Institute of Oceanography
Savannah, GA May 2011 — Present
Apply machine learning techniques to oceanographic data in order to quantify and predict zooplankton migration patterns. Used principal component analysis to investigate onshore movement of zooplankton. Presented summer findings to SkIO faculty and students.

Supervisor/Auditor RGIS, LLC
Savannah, GA Apr 2011 — Present
Use "RM-1" handheld Windows CE computer with finger-mounted laser and to complete physical inventories of many retail outlets. Set up wireless network, Windows XP host computer, and printer. Download customer programs onto RM-1s before each event. Balance and transmit inventory results to headquarters. Supervise teams of 3-25 auditors and stores with 2,000-50,000 pieces. Responsible for the integrity and accuracy of inventory data.

Wireless Engineering Intern Alcatel-Lucent
Naperville, IL Summer 2010
Created UML model of 1xEV-DO (3G voice) mobile network by reverse-engineering the source code. Used this model to generate accurate documentation for developers. Benchmarked bleeding-edge 12-core call processing servers. Wrote article about internship experience for monthly internal newsletter. Presented findings to peers and managers.

Student Web Developer Armstrong Atlantic State University
Savannah, GA Feb 2010 — Aug 2011
Used ExpressionEngine content management system to manage Armstrong.edu. Responded to helpdesk inquiries for website errors or corrections. Developed JavaScript/AJAX marketing applications. Documented server usages by departments and identified unused sites. Compiled report for Director of Enterprise Applications.

Web Application Developer Variux, Inc
Powder Springs, GA Jun 2009 — Mar 2010
Created interactive, database-driven web pages and applications using a variety of languages and technologies including: PHP, MySQL, HTML, JavaScript. Used APIs to FedEx, UPS, PayPal, and credit card processing services. Built ecommerce/shipping applications.

Delivery Driver Joe's All-American Grill
Grayson, GA Nov 2007 — Apr 2009
Delivered fresh grilled and fried food to local hungry customers. Washed dishes, prepared chicken wing baskets. Executed most efficient route to/from customer locations.

Server Administrator NeonCube Internet Solutions
Grayson, GA Feb 2006 — Mar 2009
Started and managed web hosting company. Responsible for the constant uptime of three Linux web servers. Used cPanel server management software. Developed PHP/MySQL sales referral system. Developed web applications on a contract basis.

NOTABLE PROJECTS

Oceanographic AI Skidaway Institute of Oceanography
MATLAB, MATLAB Neural Network Toolbox, Mathematica Aug 2011 — Present
Apply machine learning/artificial intelligence techniques to gigabytes of oceanographic data in order to understand trends, identify patterns, and predict zooplankton migration depths. Quantify the interaction between temperature and plankton migration.

Onshore Plankton Movement Skidaway Institute of Oceanography
MATLAB May — Aug 2011
Used principal component analysis to characterize ocean current data. Analyzed zooplankton migration data with respect to measured ocean currents. Hypothesized net onshore movement of zooplankton during summer months, followed by net offshore movement during winter.

Lane Library Style Update Armstrong Atlantic State University: IT Services
HTML, CSS, JavaScript Jan — Apr 2011
Transferred content from old static library site to new ExpressionEngine CMS. Preserved page content while adhering to marketing's Web Style Guidelines.

Conway's Game of Life Armstrong Atlantic State University: Digital Design Lab
C, VHDL, Altera Quartus and SOPC Builder Nov — Dec 2010
Created simulation of Conway's Game of Life on Altera DE2 development board. Used Nios II FPGA soft processor to run C code. Output to VGA and onboard LCD and 7-segment displays.

1xEV-DO Documentation Alcatel-Lucent
Rhapsody, Python, Q Jun — Aug 2010
Used IBM's Rhapsody UML software to reverse-engineer C++ source code for AT&T's 3G voice network. Created Python script to correct the raw data of the model. Produced documentation with ReporterPlus reporting software coupled with Q templating language.

Server Benchmarking Alcatel-Lucent
bash, C, Perl, MontaVista Linux, VxWorks Jun — Aug 2010
Developed bash script to run Memory Stress Benchmark on two 12-core MontaVista Linux blade servers. Controlled for L1/L2 caching and emulated normal call loads. Evaluated network throughput over GbE link while under heavy CPU/memory stress. Ran same benchmarks on VxWorks-based predecessor and measured performance gains.

PauldingNetworking.com Variux, Inc
HTML/CSS, PHP/MySQL, jQuery Dec 2009 — Mar 2010
Developed web-based shipping application for computer repair shop. Users fill out an order form and UPS or USPS would come pick up their computer for shipping to repair shop. Used RocketShip.it API for shipping, and payment APIs to Authorize.net and Google Checkout. Created administrative backend and shipment tracking pages.

Website Update Gwinnett County Habitat for Humanity
Flash, ASP, HTML/CSS Jul — Nov 2008
 Performed pro-bono web work for local Habitat for Humanity organization. Updated Flash-based news reel. Added news articles and uploaded pictures. Troubleshooted and updated ASP form processor. habitatgwinnett.org

Student Management System Grayson High School: Programming Business Systems
HTML/CSS, PHP/MySQL Mar — May 2008
 Designed and developed web-based information system for IT class. System managed student personal information, grades, assignments, classes, attendance, discipline, and library books. Allowed for parent login. Designed database for Boyce-Codd normal form.

ExpressionsByCK.com NeonCube Internet Solutions
HTML/CSS, PHP/MySQL Sep 2007 — Feb 2008
 Developed ecommerce website for home decorations business. Created user registration system and administrative backend. Interfaced with Authorize.net for credit card transactions.

TXMore.com NeonCube Internet Solutions
PHP/MySQL, HTML emails, SMS parsing Jul — Sep 2006
 Developed text-for-info system for real estate developers. Used PHP to process SMS messages which came in as emails. Parsed message to reply with requested property and contact information. Sent reply SMS by identifying provider and using email-to-SMS system.

Content Management System NeonCube Internet Solutions
PHP/MySQL, HTML/CSS, JavaScript Nov 2005 — Apr 2006
 Developed online content management system for computer hardware review website. Included WYSIWYG HTML article editor, file uploads, multiple user privilege levels. Implemented flexible advertising placement and tracking. Pro-Clockers.com.

RELEVANT COURSEWORK

Armstrong Atlantic State University

MATH 3411	Differential Equations	<i>Mathematica</i>	Aug—Dec 2011
MATH 2160	Linear Algebra	<i>Maple</i>	Aug—Dec 2011
CSCI 2490	C++ Programming	<i>C++</i>	Jan—May 2011
ENGR 1371	MATLAB Programming	<i>MATLAB</i>	Jan—May 2011
CSCI 2410	Data Structures	<i>Java</i>	Aug—Dec 2010
ENGR 2030	Computer Architecture and Organization	<i>Assembly</i>	Jan—May 2010
CSCI 1302	Object-Oriented Design	<i>Java</i>	Jan—May 2010
CSCI 1301	Introduction to Programming Principles	<i>Java</i>	Aug—Dec 2009

Gwinnett Technical Institute

CIS 106	Modern Computing	<i>Oracle</i>	Aug—Nov 2008
CIS 2321	Intro to LANs and WANs	<i>Cisco IOS</i>	Nov 2008—Mar 2009
CIS 2322	WANs and Routing	<i>Cisco IOS</i>	Mar — May 2009

Grayson High School

Foundations of Information Technology			Aug—Dec 2007
Programming Business Systems		<i>Access</i>	Jan—May 2008

SOFTWARE EXPERIENCE

Programming:	Java, C, C++
Scripting:	PHP, JavaScript, bash, Perl, Python
Databases:	MySQL, MSSQL, PostgreSQL, Access, Oracle
Web / Presentation:	(X)HTML, CSS, AJAX, jQuery, Q, \LaTeX
Computation:	MATLAB, Mathematica, Maple, Sage
Operating Systems:	Windows, Linux, Cisco IOS, Solaris, VxWorks
Modeling:	Rhapsody, Visio, Microsoft Project
Embedded system design:	Altera Quartus, SOPC Builder, VHDL, C