OTTAVIO C. D'ANGELIS
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Software Engineer

SUMMARY:

Experienced with tech-lead, project management, system integration, design, programming, UX, and database experience in a variety of industrial sectors. Given a little time, Can both design custom software from scratch and troubleshoot and reverse-engineer various software products.

I have written code within the **UNIX**, **Windows**, and **TANDEM** environments for the following clients:

UNIX: for California Institute of Technology/Advanced Research Projects Agency, Georgia-Pacific / Unisource Corporation, Chase-Manhattan Bank, CLC, ATX Telecom, Computer Command And Control Corporation / Naval Research Laboratories, GTX Telecom, Libra Systems Corporation, ITI Telecom, BHC/Fiserv Corporation, University of Pennsylvania Molecular Biophysics Labs, University of Pennsylvania High-Energy Physics Labs, The Research Corporation; et al...

Windows: for Boeing Defense/ARGON-ST C4ISR, Computer Task Group/Metals Solutions, PNC Bank,.Country Structures Corporation, Georgia-Pacific/Unisource Corporations, Reliance Insurance Company, Commonwealth Land Title Insurance Company, Compass Technologies Security Systems, Fine Arts and Software, Data Display Corporation, Science Applied International Corporation, Automated Financial Systems; et al.

Tandem: for Unisource, BHC Securities/FISERV, ITI Telecommunications, and Automated Financial Systems.

OBJECTIVE:

An intermediate-level Web Skills and intermediate-to-high-level Backend software engineering position that will allow me to increase my skills and contribute.

TECHNICAL SKILLS:
- C, C++, Visual C++, and C# Programming
- ASP.NET/HTML/CSS and JavaScript
- WinForms .NET
- Microsoft T-SQL, Oracle SQL, and IBM DB/2
- Microsoft Office Suite

TECHNICAL WRITING:
   Have produced full UI documentation, tech requirements, specs, plans, user, coding, and programming manuals for those clients who wish them. Have taught beginning through advanced programming at ITT night school. Total of seven years technical training and documentation experience.

PROFESSIONAL EXPERIENCE
(please note: I had been recovering in the hospital for a year from a severe accident. Please let this explain to you about the gap in my resume over '17. I am more than ready now to get back to work.)

Ameripride Financial Services, Green Bay, WI
Software Engineer
3/18-9/18
- Rewrote the section of code that was responsible for synchronizing Ameripride's state-to-state insurance bylaws internally for high-speed caching.

Environment: C++ and Microsoft SQL Server (Using T-SQL)

Educational Testing Services,
Princeton, NJ
Software Engineer

11/15 – 12/16
- Responsible for the use and maintenance of an in-house tool to properly design, encode the answer sheet, and ultimately grade multiple-choice tests such as the SATs, GREs, LSATs,; etc…
- Drove the creation of new test elements from design to working h/w & s/w units.

Environment: Visual Studio C# 2015, ASP.NET, C++

Boeing Defense Systems,
Doylestown, PA
Software Engineer / Team Lead
10/13 to 4/15

I A R P A / DOD PROJECT C I A D / J U M P S /// CONTEXT-INDEPENDENT ANOMALY DETECTION FOR THE JOINT UNIFIED MULTIPURPOSE PROTECTION SYSTEM FOR BOEING DEFENSE SYSTEMS
- Responsible for software augmentation of a web-based, cloud-based, combined C4ISR sensor system designed to automatically monitor and analyze the movements of all commercial ships along United States Waterways and Coasts and alert DHS of any anomalous behavior
- Was the sole liaison between BOEING engineers (who manufactured the hardware/software) and HILBERT TECHNOLOGIES, LLC scientists (who provided the 'brains' of the AI and the big data facilities). This required me to pick the brains of the scientists at a technical level and relay their needs/wishes back to Boeing in plain English both verbally and in writing, and vice-versa.
- Briefed everybody who needed to know between the two companies and kept them on the same page on a routine basis.
- Project involved reverse-engineering of a complex hardware-software client/server system across multiple tiers, involving SOA web proxies, remoting, and database updates   Code was Written in C, C++, and C#
- Created SOAP services which captured previously created inbound web services requests and shuttled them to the intelligence analysis client in near-real-time for analysis and then re-enfolded their ascertainment of ships of interest back to the services.
- Created an MVC 'dashboard' to allow operators to interactively zoom in on a map and interrogate ships' histories and annotate their movements.

Environment: C++, Linux, Windows, C#, Visual Studio 2008, ASP.NET, SQL Server 2005, T-SQL

Communications Test Design Corporation,
West Chester, PA
Software Engineer
10/12 to 3/13
- Performed software design, hardware selection and procurement, software development, and maintenance on a logistics system for a global telecommunication service outfit
- Responded to day-to-day requests with minimum specifications and management to assist the firm

Environment: IBM AIX (UNIX) C and C++. ZEBRA ZPL2. Visual FoxPro, SQL

Country Structures Corporation, Quakertown, PA
Systems Architect
8/11 to 9/12
- Performed software maintenance on an accounting, business management system and ASP.NET-based web portal that I wrote for a mid-sized ($10M gross/annum) retail chain in the early 00's.
- Used MVC to create a web-based ordering system to allow customers to free-form create and examine their orders over the internet.

Environment: Visual Studio .NET C#/ASP.NET/Visual Basic 6.0, Visual C++ 6.0, Access, VBA, SQL Server 2000, T-SQL

Computer Task Group Metals Division, Pittsburgh, PA
Systems Analyst/Troubleshooter
5/08 to 6/11

- Troubleshoot existing software at both the GUI and real-time levels for a large-scale software used for Level-II control and user interactions within three different United States Steel mills
- Analyzed the mills' needs/wishes and produced tech specs for CTG
- Trained the millworkers on all new functionality.
- Wrote Cold Fusion code to monitor and alter database setup environment client-side and interact (translate) between data formats with servers using XML/XSLT datasets and their native formulations to Oracle and SQL servers (using Oracle PL/SQL and MS T-SQL)

Environment: UNIX C++. Microsoft Visual C++ 6.0 and .NET WinForms/Visual Basic/C# 1.1-3.5/ColdFusion MX, PowerBuilder, Visual FoxPro, Micorosoft T-SQL, IBM DB/2

Dynex Technologies/Magellan Biosciences, Manassas, VA
Systems Analyst/Troubleshooter
12/07 to 4/08
- Troubleshoot existing software at both the GUI and real-time levels for a highly complex software product used for control and user interactions within a robotized biological assaying device

Environment: Microsoft Visual C++ 6.0 and WinForms/C# 2.0, Micosoft SQL Server/T-SQL

PNC Bank, Pittsburgh, PA
Systems Analyst/Troubleshooter
10/07 to 12/07
- Troubleshoot existing s/w and designed new Middleware Business Logic and XML Translation components written in a variety of hybrid C, C++, Visual Basic, COM+ and .NET technologies to Oracle and SQL Server back-ends for a banking infrastructure system with back-end servers running on both Windows and IBM AIX systems intercommunicating with the assistance of IBM MQ
- Trained PNC coders how to use the components

Environment: Microsoft IIS, C, C++, C#, Visual Basic 6.0, .NET, SQL (DB2/MSSQL and T-SQL/Oracle-X), XML, XSLT

Aramark Corporation, Philadelphia, PA
Embedded Systems Analyst and Programmer
9/06 to 11/06
- Performed Low-Level debugging and Management-Level knowledge cohesion among 2 VARs and Symbol OEM to fix a Palm/OS Conduit to Aramark's data warehousing system
- Quickly discovered the nature of the problem, which involved binding parameters, license keys, and old-style DLL interface numbering within two sets of 3rd party vendors, and then came up with a patch which could be shipped out to all of the profit centers and downloaded onto the Palm Devices to fix the problem

Environment: Palm OS, AMX Kernel, AppForge CrossFire, Visual Basic 6, COM+, Visual FoxPro

Country Structures Corporation, Quakertown, PA
Systems Analyst
1/02 to 7/07
- Designed and coded a complete business management/ERP solution and ASP.NET-based web portal for a mid-sized ($10M gross/annum) retail chain, from scratch.
- The clients had no experience with computerization. I had to take them by the hand, ask them their needs, design functionality, then present the proposed functionality to get feedback (full lifecycle / business analysis)
- The system was originally designed only to track inventory and sales in the back office, it grew to include a live point-of-sale system, an expense tabulator, a jobbing unit to keep per-sale costs down, a complete accounts receivable unit to track large customer's invoicing and payments, an accounts payable unit to keep track of what consignment and flat purchases were performed for each vendor so that with a few mouse clicks the comptroller can cut checks to vendors and see which consignment purchases were outstanding

Environment: Visual Studio .NET C#/ASP.NET/Visual Basic 6.0, Visual C++ 6.0, Access, VBA, SQL Server 2000 and T-SQL

Compass Technologies Corporation, Exton, PA
Systems Analyst

2/05 to 9/05

- Provided high-level software refactoring from a system in Delphi to one in C#, and, at a coding level, assisted in the design creation of a new C# Presentation Layer and solely responsible for a multithreaded TCP/IP XML – to .NET caching and remoting middleware product to streamline communications between the WinForms front-end and a Visual C++ multiprocessing server

Environment: Visual Studio .NET C#/ASP.NET/Delphi/Visual C++ 6.0, Access, SQL Server 2000, T-SQL

Video Game Designer (2004)
Philadelphia, PA

- Conceived, designed, and developed Retro, a graphical physical simulation arcade 'shoot-em-up' with artificial intelligence, object avoidance, and heuristic 'fight-or-flight' tactical control for all non-player actors
- Developed own object-oriented game engine for same and all linear algebraic, neural net, potential functions, and graphics routines were written completely from available mathematics and graphics primitives
- Full source code and working prototype .exe file are available

Environment: Visual C#, Managed DirectX, OOP/OOAD, Open GL, Multivariate Calculus, Vector Algebra, Artificial Intelligence and Pattern Recognition

Georgia-Pacific Paper, Exton, PA
Business Process Analyst (Consultant)
5/03 to 8/03

- Part of a team that designed BizTalk Orchestration and XLANG Messaging and Specification templates for machine-controlled ANSI X12 compliant Accounts Receivable communications and process workflows with client Trading Partners (alongside counterpart analysts at the Partner Corporations) for eleven of Unisource's Largest Customers

Environment: VB.NET, ASP.NET, C#, Visual Basic 6.0, Microsoft TSQL, SQL Server, Oracle 9, PL/SQL Microsoft BIZ TALK '02, Microsoft MQ

Country Structures Corporation, Quakertown, PA
Systems Analyst and Programmer
1/02 to 12/02

- Designed and coded a complete business management solution and ASP.NET-based web portal for a mid-sized ($10M gross/annum) retail chain which includes a real-time Point-Of-Sale system combined with Accounts Receivable, Payable, General Ledger, Inventory, and Executive Task Management modules (such as Job and Resource Scheduling), functioning as a completely paperless workflow environment
- Gathered specifications, administered and designed the database, designed the User Interface, gathered user feedback, trained users, and performed quality control

Environment: Visual Studio .NET C#/Visual Basic 6.0, Visual C++ 6.0, Access, SQL Server 2000

Georgia-Pacific Paper, Exton, PA
Systems Integration Consultant
5/02 to 8/02

- Acted as a Management Business Analyst
- Designed and implemented a Customer Loader batch processor for the migration and collation of customer records from thirty-seven regional legacy systems into one main data repository
- Gathered the specifics of the host systems by intensive conversations with their individual administrators.
- Programmed C++ TANDEM/PATHSEND middleware on some of the larger source regional databases and requested/consumed this data out of the TCP/IP stream through repeated requests and replies controlled by an additional loader program written in C# using the .NET FCL, which then transferred data back into the main SQL SERVER database through TSQL stored procedures
- Similar Middleware was developed to pull data out of UNIX-based Oracle data mining servers through a combination of C++, TCP/IP and PL/SQL

Environment: VB.NET, Visual Basic 6.0, Visual FoxPro, Microsoft C#, TSQL, SQL Server, Oracle 9, PL/SQL, Microsoft BIZ TALK '03, Microsoft MQ, TANDEM C/C++ under GUARDIAN

California Institute Of Technology/National Science Foundation/DEFENSE ADVANCED RESEARCH PROJECTS AGENCY, Pasadena, CA
Scientific Systems Engineering Consultant
9/01 to 1/02

Project: L I G O (Large Scale Interferometric Gravitational Wave Observatory)
- Managed the design implementation specifics of performance modifications to a programmable scientific modeling tool for used for the in-vivo design of a > ~$8B data collection tool using advanced software engineering techniques such as object code analysis, forensic call stack analysis of mathematical routines for optimization strategies, expression templates, call graph profiling, and multiprocessor multithreading
- Project was to design and build a device which can detect large-scale disruptions in space-time, such as black holes, supernovae, quasars; etc. We were the first team to develop an apparatus that could detect two black holes colliding. www.nytimes.com/2016/02/12/.../ligo-gravitational-waves-black-holes-einstein.html
- Worked intensively with LDAS Data Analysis division.
- Achieved a 250% performance increase in the system, redesigned the software's threading model and ported the software to run as a client-server system on a 1024-processor supercomputer running on EXEMPLAR HP/UX

Environment: C++, POSIX PTHREADS, TCP/UDP/IP, STL, CORBA, IIOP, Oracle 8, PL/SQL, SOLARIS UNIX, Hewlett-Packard Exemplar Five Series Supercomputers and HP K-5 OS

Rudolph Technologies, Inc., Mt. Arlington, NJ
Project and Quality Assurance Manager
2/00 to 9/01
- Managed a team of consultants to proactively reverse-engineer, locate, and terminate bugs within a large-scale (~20 MB/~800,000 line source code) embedded real-time OS/2 C++ system used to control a $5M quality-control machine for the semiconductor fabrication industry
- Liasoned between the management, engineers and the programmers to codify what needed to be done.
- Worked with Q/A to get user feedback
- Performed hands-on technical troubleshooting
- Assisted scientists with the direct implementations of algorithms and their conversion into C++ from packages such as MATLAB

Environment: OS/2 Visual Age C and C++, NT, Visual C and C++/MFC 6.0, MS SQL SERVER and Oracle 7 RDBMS, REXX

Fine Arts and Software, Inc., Philadelphia, PA
Project Manager and Technical Writing Lead
1/1999 to 9/1999
- Hired, trained, and managed a team to complete reverse-engineering of a facilities management software suite

Environment: Summit Basic, SYBASE and Oracle 7 RDBMS, Visual C and C++/MFC 6.0, FoxPro/Windows 2.6

Chase-Manhattan Bank, Wilmington, DE
Communications Software Designer
1/1998 to 6/1998
- Developed and implemented foundation class hierarchies, allowing other developers to program multiple real-time communications interfaces to a large credit-analysis expert system, between various internal and external banking and credit repository computers communicating via TCP/IP/UDP and IBM MQ -based communications protocols
- This project was the back-end of Chase-Manhattan Bank's 'Let's Get You A Chase Credit Card, Instantaneous Credit Check and Approval' Web Page
- Documented the libraries and trained programmers in their use

Environment: C and C++, Win32 API, Java, POSIX V THREADING, PTHREADS, HP/UX (UNIX), Oracle 8 RDBMS

Cigna International Corporation, Philadelphia, PA
Systems Analysis Consultant (Contract)

1998
- Analyzed, reverse-documented, and redesigned the international policy sponsor billing subsystem within Cigna International's worldwide policy control system
- Reduced the end-to-end time for sponsor-based international billing per cycle from 2 weeks per run, to 3 days, to produce billing information for all of Cigna's policyholders, worldwide

Environment: OS/2 C, C++, EASEL, SQL, OS/2, DB/2

ITT Technical Institute, Plymouth Meeting, PA
Software Engineering Instructor
1998 to 2000
- Instructed night courses in C, C++, and Math for students with basic skills.
- Explained and demonstrated the benefits and nuances of object-oriented design including encapsulation, run-time polymorphism, parametric polymorphism, and general OO design philosophy and practice
- 94% Student Success Rate

ATX Telecommunications Corporation, Philadelphia, PA
Software Engineering Consultant
1998
- Analyzed and modified billing and costing modules to a give users OLAP reporting abilities, providing a per-region telecommunications cost-accounting API
- API provided a categorized profit-and-loss statistics sortable across a variety of dimensions

Environment: XENIX C, OLAP

Data Display Corporation, Philadelphia, PA
Software Engineering Consultant
1997
- Designed and implemented a cross-platform dynamic data manager for bi-directional porting of FoxPro data tables and Windows-based graphics to a proprietary 8051-based embedded operating system used within an electronic vote-tabulating machine

Libra Systems Corporation, Horsham, PA
Software Engineering Consultant
1997
- Performed software maintenance on a PC-based multi-process real-time control system for automatic asphalt plant control

ITI Telecommunications Corporation, Philadelphia, PA
Software Engineering Consultant
1997
- Re-engineered a TCP/IP-based TANDEM-to-AIX and TANDEM-to-NT SQL transaction replication server to improve throughput performance by 115% against software bottlenecks

BHC Securities Corporation, Philadelphia, PA
Software Engineering Consultant
1996 to 1997
- Designed and implemented a TCP/IP to TANDEM/PATHSEND communications package and protocols and numerous TCP/UDP/IP-based server, client, and middleware modules distributed over a very-high-throughput 4-tier brokerage services system
- The system ran on TANDEM, AIX, and NT platforms, and connected to the New York-based stock exchange computer systems housing NYSE and NASDAQ
- One of the middleware tasks was to re-engineer a single-threaded (blocking) presentation layer written in Visual Basic to a multithreaded one through the design and use of a new multithreaded/asynchronous callback Visual C++-based communications layer DLL which talked to other points of the system

- Used unbuffered, raw UDP sockets
- Developed a Java server-interface package for machine-independent client-side communications
- Consulted with the Legacy Systems division and provided the design and operational specifics of automated COBOL source code conversion utilities written in TANDEM TAL for in-house Y2K code compliance

Environment: TANDEM TCL and C, NT 4, AIX, Oracle 7 RDBMS, Java 1.1, Visual C and C++, HTML, COBOL, TCP/IP and WinSock

GAI-Tronics Corporation, Horsham, PA
Software Engineering Consultant
1996

Computer Command Control Corporation/United States Defense Department, Philadelphia, PA
Scientific Software Engineer
1995

Reliance Insurance Corporation, Philadelphia, PA
Embedded Software Engineer
1994

Scientific Software Engineer
1993-94

University of Pennsylvania Molecular Biophysics Laboratories / WISTAR INSTITUTE
- Wrote 3 programs to assist Biophysicists in Rational Drug Design for immunology and cancer research:

  SPOMS (Site-Points of Molecular Surface) – 3D Hydrogen Bonding Analyzer
  DOSPLOCS (Docking of Site-Points to Protein Ligand over Complementary Space) Heuristic 3D Pattern Matcher
  PROMLATS – (Protein Closed-Loop Mathematical Lattice Simulator) Thermodynamic Brute Force Protein Folder

- Wrote all 3 programs from scratch while teaching myself C++, utilizing all relevant background mathematical and scientific papers such as computer vision and heuristic AI, while at the Wistar Institute Under Dr. Tom Kieber-Emmons.

Environment: SGI IRIX / C SHELL / C / C++ using OpenGL.

CERTIFICATIONS

- **Microsoft .NET MCSD Accreditation (2005)**
- **Master's Certificate in Microsoft .NET Programming (2004)**
- **I.S.O. Certified C++ Programmer (1999)**
- **TANDEM Certified C++ Programmer (1996)**

EDUCATION

American Military University (Distance Learning)
Bachelor's Degree in Intelligence Analysis (In Progress)

Set Focus University, Parsippany, NJ
Master's Degree in Applied Computer Science – 2004

Lebanon Valley College, Annville, PA
Dual Bachelor's Degrees in Mathematics and Physics (Magna Cum Laude) – 1993