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Most recent version at: http://www.dre.vanderbilt.edu/~spaunov/files/resume.doc

Education

Present: **Vanderbilt University** Nashville, TN **(graduating in May 2006)**
Master of Science in Computer Science, **GPA:** currently 3.8, Advisor: Dr. Douglas Schmidt.

May 2004: **Denison University** Granville, OH
*Bachelor of Science (**Cum Laude**)* in Computer Science, German minor, **GPA:** cumulative: 3.7, major: 3.85, minor: 3.90

Honors

The 2005 Chancellor's List; 2004 UPE Microsoft Scholarship Award; Elected member of Upsilon Pi Epsilon (International Computer Science Honorary); Ethan D. & Hallie Roberts Memorial Award; 2 times recipient of the annual Forbes Wiley Award (in recognition of academic achievement in Computer Science); Elected member of the Phi Society (Academic Honorary).

Computer Skills

Programming and Design:

- C, C++ (6 years)
- Perl (3 years)
- Some knowledge in: MIPS Assembly, INTEL Assembly, Maple, Java
- OOA/OOD/OOP (6 years)
- Concurrency and Synchronization (4 years)
- Scalability, Efficiency and Performance Analysis, Reliability (4 years)
- Software patterns (3 years)
- Portable and efficient software framework and middleware development (2 years)
- Model-driven development (MDD) (2 years)

Frameworks, Platforms, and Tools:

- Development under both Windows and Linux/Unix platforms (6 years)
- *Common Object Request Broker Architecture* (CORBA) (2 years)
- *ADAPTIVE Communication Environment* (ACE) (2 years)
- *The ACE ORB* (TAO) (2 years)
- The *Component Integrated ACE ORB* (CIAO), developer (2 years)
- *Generic Modeling Environment* (GME) (2 years)
- CoSMIC tool chain, developer (2 years)
- *Universal Data Model* (UDM) framework

Other Relevant Technologies: TCP/IP, HTTP, XML, XERCES-C, UML, HTML, Apache HTTP Server modules, PostgreSQL, SQL, libpqxx, Perl::DBI, ZZIP, MATHLAB/Simulink, debuggers, Valgrind, Purify, multi-threading, database application development, network security issues, MS Visual Studio, Emacs

Other skills

Principles of Economic Thought, Intermediate Microeconomics and Macroeconomics, Business German

Recent Experience

Research Assistant (2004 – 2005)**,** Institute of Software Integrated Systems (ISIS) at *Vanderbilt University*: member of the Distributed Object Computing (DOC) group under the leadership of Dr. Douglas Schmidt.

- Research and development of distributed real-time and embedded (DRE) infrastructure middleware and applications.
- Application of *Model-Driven Development* techniques to manage accidental complexities associated with large-scale software and to aid the rapid and error-free software development and configuration.
- Developed *RepoMan* – a Component Repository Manager for Enterprise DRE Systems, part of the CIAO distribution. RepoMan is a CORBA object that is HTTP aware. It keeps track of software

implementations and configuration metadata in heterogeneous environments. It enables the (re)deployment and (re)configuration of applications and facilitates online component upgrades.

- Developed a *Quality of Service Policy Modeling Language* (QoSPML), which is an MDD tool that allows developers to configure CORBA components to exhibit real-time quality of service characteristics. Integrated QoSPML in the *Component Synthesis with Model Integrated Computing* (CoSMIC) MDD toolchain.
- Extended the JAWS HTTP web server, which is part of the *ADAPTIVE Communication Environment* (ACE) distribution.
- Added HTTP capabilities to the CIAO Deployment and Configuration Engine (DAnCE), to enable it to fetch and deploy remote component implementations
- Contributed to the design of the CIAO packaging tools
- Working on the Planner in CIAO which looks up component packages, checks their requirements against the currently available resources and comes up with a deployment plan to deploy the application

Summer 2005 **Automated Trading Desk** (ATDesk). Software Engineering Intern on the BORG infrastructure team

- Designed and implemented a high-performance stock market activity logging application which was responsible for gathering real-time quote and trade stock market information and storing it in a database. I used ACE, TAO, and some proprietary software technology for the project. The database backend was PostgreSQL.
- Developed code generators that parse the C++ code from the above application, generate unit tests and run them.
- Developed a framework of object-oriented Perl classes which allowed the easy extraction of information from the quote and trade database and the order databases. It allowed the easy querying and verification of order executions.
- Developed a Perl script which queried the order databases for certain orders and emailed a summary to the help desk.

2004 – 2005 **Teaching Assistant** *Vanderbilt University*: Software Design Studio; Middleware QoS; Network Analysis/Simulation

Summer 2003 **Anderson Research Program** *Denison University*

- Received a scholarship for a research project entitled "Content Addressable Storage (CAS) Providers and Clients" the focus of which was extending the reach of CAS technology by exporting it on the Internet by means of scalable technology.
- Designed and implemented a CAS over HTTP communication protocol, a CAS provider implemented as an Apache server module, a stand-alone multi-processed CAS server, and a CAS client. The project was part of a series of projects involving multiple parties aiming at the realization of the CAS system model

Summer 2002 **Anderson Research Program** *Denison University*

- Received a scholarship for a research project entitled "Topological Logics," in which our two-member team invented a number of logical systems built on top of topological structures

Other Selected Projects

- Team projects in Computer Networks: TFTP server and HTTP Web proxy compliant with their respective RFC specifications and featuring multi-processing capabilities
- Part of a three-member team to work on implementing an operating system (NACHOS), using concepts in multi-threading, multitasking, synchronization, virtual memory and file management
- Implemented a Floating-point math library for the MIPS architecture, written in MIPS assembly.

Basic Skills trilingual – spoken/written German and English, native Bulgarian, analytical reasoning, research, leadership, organization, teamwork, decision-making, people skills, presentation skills.

Leadership Positions Held

Upsilon Pi Epsilon (National Computer Science Honorary) Denison chapter President 2003-2004
Stibitz Computing Society President 2003-2004; Vice-President 2002-2003
Computer Science Department Fellow 2002-2004