

Cilloniz Bicchi, Ferner

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Education

May 2010

M.S. in Computer Science

The University of Texas at Austin, Austin, T.X.

- Research Areas: semantic web ontology, secure operating systems, network security, and computer security.
- Minor Area: statistics and scientific computing.

May 2009

B.S. in Computer Science

The University of Texas at Austin, Austin, T.X.

- Certified INFOSEC Professional. Recognized and created by the National Security Agency (N.S.A.).
 - Research Area: semantic web ontology.
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Employment

June 2009 –
August 2009

Financial Software Developer

Bloomberg L.P., New York, N.Y.

Worked in the Research and Development Department as a Financial Software Developer in the UI Core Data Group. My mentor was Paul Sader. A brief description of my involvement is the following:

- Created a C# library with equal semantics and similar syntax to the C++ Aggregate API. This allowed me to gain experience in C++/CLI, C#, and DLL library creation.
 - Created a library, and API, for performing XPath query searches and XSLT transformations on XML schema files stored as aggregates. The library and API was programmed in C++ and later in C++/CLI to be later referenced within C# applications.
 - Enhanced and redesigned the SOTR manifest build tool. Used for creating new monthly Bloomberg Terminal builds, this tool allows software developers, and team leaders, to create, modify, build, and mark differences between multiple XML manifest files describing the build. This project provided me with exposure to C# (.Net), XAML, parsing XML, SVN, and .Net filesystem classes.
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Research Experience

August 2007 –
Present

Graduate Research Assistant

Department of Computer Science

The University of Texas at Austin, Austin, T.X.

Ontobrowser: An Advanced Ontology-based Image Retrieval System

By employing knowledge representation, ontology matching, and image segmentation algorithms, this project promises to close the gap in information retrieval. My research advisor is Dr. Daniel P. Miranker (www.cs.utexas.edu/~miranker).

- Creation of a web-based image ontology browser (Ontobrowser) and image retrieval system, in Java.
- Enhanced Ontobrowser to allow a connection between the Morphster database and Morphbank database at Florida State University.

Morphster AToL: Image-driven Ontology Editing

Funded by a 4-year NSF grant, this project facilitates systematic biologists to create ontology through the novel concept of Image-Driven Ontology editing. My research advisor was Dr. Daniel P. Miranker. My participation in this project has been in the following (www.morphster.org for more information):

- Creation of a web-based translation tool between OBO and OWL languages (Obo2Owl), in Java.
- Contributing in a team engineering project for image-based ontology editing and creation (Morphster) written in Java.

FreeKit: An Advanced BSD Kernel-Level Rootkit

Researched and understood the low-level and high-level details of the design and implementation of kernel-level rootkits for modern day operating systems. Understanding the attack vectors and points of vulnerability were identified. The results were: a technical paper, and a complete implementation of an advanced and sophisticated rootkit for the Mac OSX and BSD operating systems, written in C.

Technical Skills

- Programming Languages: C, Java, C++, C# (.Net), C++/CLI.
- Scripting Languages: Perl, PHP, Python.
- Assembly Languages: IA-32, IA-64, MIPS.
- Operating Systems: Linux, OpenBSD, FreeBSD, Mac OSX, MS Windows (95 - Vista).
- Miscellaneous: Eclipse, Microsoft Visual Studio, Google Web Toolkit (GWT), Java Servlets, Java Applets, RCP Developer, JFace, SWT, AWT, Mantis (bug tracker), CVS, Subversion, Tomcat.

Selected Course Work

Graduate Course Work

- Theory & Practice of Secure Systems.
- Cryptography.
- Autonomous Robots.
- Natural Language Processing.
- Programming Languages.
- Algorithmic Game Theory.
- Scientific & Technical Computing.

Undergraduate Course Work

- Network Security & Privacy.
- Information Assurance & Security.
- Computer Security.
- Computer Networks.
- Operating Systems.
- Computer Architecture.
- Software Engineering.
- Algorithms.
- Algorithms & Data Structures.
- Theory in Programming Practice.
- Programming Languages.

Scholarships and Awards

- May 2009 • INFOSEC Professional.
- August 2008 • Tracor/McBee Scholarship.
- August 2008 • G.E. College Bowl Scholarship.
- August 2007 • National Science and Mathematics Access to Retain Talent (SMART).
- July 2006 • General Motors Engineering Excellence Award.

Memberships & Affiliations

- Association for Computing Machinery (UT Austin chapter).
- Upsilon Pi Epsilon (International Computer Science Honor Society).

Languages Spoken

- Fluent: English and Spanish.
- Proficient: Italian.

References

- Dr. Daniel P. Miranker
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- Dr. Vitaly Shmatikov
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- Dr. William D. Young
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