

Attilio Rao
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Objective

To obtain a full time position in software development, preferably at the kernel level (in particular if related to open source projects such as FreeBSD) or at low level development.

Skills

- Operating systems development at the kernel and system level
- Virtualization and hypervisor development
- Architectures: ia32, amd64, ia64
- Programming languages: C, C++, assembly
- Data structures and algorithm analysis
- Imperative programming
- Generic programming (templates)
- Concurrent programming
- Unix network programming
- System security
- Revision Control Systems: Perforce, CVS, SVN, Mercurial, GIT

Experience

Jun 2012 – Jan 2013: Core team member, The FreeBSD Project

Directing and managing socially, morally and technically the development of the entire FreeBSD project.

May 2007 – current: Software engineer, The FreeBSD Project

Major contributions to the FreeBSD kernel in particular in the following areas:

- SMP and scalability

- VFS and filesystems
- Scheduling
- Interrupt and timers subsystem
- Virtual Memory
- Debugging and performance analysis tools

January 2013 – Current: Principal software engineer, EMC Incorporated

Member of the performance team, focused on kernel performance optimizations on the OneFS product, to the Virtual Memory and VFS subsystems.

January 2012 – December 2012: Senior software engineer, Citrix Systems

Member of the platform team responsible for the development of the opensource XEN hypervisor and its integration in the Linux kernel

January 2009 – December 2011: Senior software engineer, Sandvine Incorporated

Member of the kernel team and maintaining the support for the internal Sandvine's operating system:

- Several activities on the kernel including modifies to the RAID drivers, network drivers, crash recovery, filesystems
- Netdump development (utility to make coredumps available through network)
- Performance evaluation tools and debugging improvements (Valgrind FreeBSD port, among other)

May 2009 – December 2009: Software engineer, Yahoo! Incorporated

Maintain the support for proprietary operating system

- Performance and scalability improvements over the VFS layer
- Stability fixes for VFS and NFS subsystems

August 2008 – January 2009: Software engineer, Nokia Incorporated

Maintain the kernel and platform support for the IPSO appliance

- Development and improvements to debugging and benchmarking kernel tools
- General kernel bugfixes and improvements

May 2008 – August 2008: Google Summer of Code menthor, Google Inc.

Mentoring a student during the “Google Summer of Code” 2008

February 2007 – December 2007: Software engineer, NGX Italy

- Modifying userspace FreeBSD tools
- Userland tools and appliances development
- PHP related activities

June 2007 – September 2007: Google Summer of Code applicant, Google Inc.

Member of the Summer of Code project, working on the FreeBSD kernel

March 2004 – September 2004: Software engineer, S.I.A. Group, Italy

- Porting monitoring software from Windows to Linux
- Writing device drivers for the Linux kernel
- Modifying and patching system manager software on embedded architectures (Hitachi SuperH2 processor)
- Introducing and following staff technical members in the Unix software development

January 2003 – August 2003: Software developer, SoftTech, Italy

- Various tools development in the Linux environment
- x86 low level optimizations to existing software

References available upon request

Education

December 2007: Bachelors of Electronic Engineering, University of Rome “La Sapienza”, Italy

Score: 100/110 Relevant courses acquired:

- Network theory and TCP/IP specifics
- Programming with imperative paradigm
- Databases

- Operating systems theory
- Electromagnetism theory and applications
- Remote sensing theory
- Signal processing
- Analog electronic systems theory

June 2003: High-School diploma, Scientific grammar school “G. Galilei”, Mondragone, Italy

Publications

02/07/2010: MeetBSD Conference, University of Krakow The VFS/vnode layer in the FreeBSD kernel

16/03/2009: AsiaBSDCon conference, University of Tokyo The locking infrastructure in the FreeBSD kernel

16/10/2006: Net&System security conference , CNR of Pisa, Italy Linux & FreeBSD: attacking the kernels

12/05/2006: BSDCan conference, University of Ottawa Subverting the FreeBSD ABI subsystem for phun and profit

Languages

Italian as mother language

English fluent, both spoken and read

Basic knowledge of French and Spanish

Sports

Soccer, boxing, swimming, cycling