

SAMUEL JACOB

(kernel developer)

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SKILLS SUMMARY:

- In-depth knowledge in **Operating System Design and Implementation**.
- Good in **C, Assembly(x86, alpha)** and **Data structures**.
- Well versed in **Tru64** kernel.
- Exposure to **Windows Driver Model, HPUX and Linux kernel internals**.
- Self driven, with a strong sense of initiative and ownership.

ACHIEVEMENTS:

- **Designed and created an Operating System from scratch – Ace microkernel**
- **Debugged and fixed various critical bugs** in Tru64 kernel.

PROFICIENCY:

Languages	Assembly(nasm and masm), C(gcc), C++ and VC++
Hardware Architectures	x86, x86-64, Alpha and IA64 SMP and NUMA
Debuggers / Emulators	DBX, Crash, GDB, p4 and WDB Vmware, Qemu, Virtual PC and Bochs

PROFESSIONAL EXPERIENCE:

- ♦ **SYSTEM SOFTWARE ENGINEER** **June 2006**
Hewlett Packard, Bangalore (www.hp.com)
- ♦ **SENIOR DEVELOPER** **June 2004 – June 2006**
Photon Infotech, Chennai (www.photoninfotech.com)
- ♦ **PROGRAMMER** **May 2002 – May 2004**
American IT Solutions, Chennai
- ♦ **PROGRAMMER** **Jun 2001 – Feb 2002**
Elite Software Systems (P) Ltd, Chennai
- ♦ **JUNIOR PROGRAMMER** **May 1999 – May 2001**
Arrow Computers, Tuticorin

EDUCATION & CERTIFICATES:

- **Master of Computer Applications (MCA)**
Alagappa University.
- **'O' Level (DOEACC, New Delhi)** (<https://www.doeacc.edu.in/index.jsp>)
- **Bachelor of Science (Chemistry)**.
Manonmanium Sundaranar University, Tuticorin.
- **BrainBench 'C Programmer'** Certificate

PROJECTS:

✦ **Ace OS** <http://apps.sourceforge.net/mediawiki/aceos/>

Ace is a 32 bit micro kernel runs on x86 machines. It is preemptive kernel. It has support for file system (VFS, FAT) and drivers. Networking stack is developed as user mode application.

✦ **Tru64 Kernel**

Tru64 is a 64 bit operating system running on Alpha servers (RISC) for enterprise market. Tru64 is a multiple address space monolithic kernel. It has support for clustering.

http://en.wikipedia.org/wiki/Tru64_UNIX

Responsibilities:

- Own all Tru64 kernel components- virtual memory, process management, scheduler etc
- Fix various critical defects in Tru64 kernel on time
- Mentor freshers in the team
- Review others code
- Customer/field interaction

✦ **HPUX Kernel** (<http://en.wikipedia.org/wiki/HP-UX>)

HPUX is HP's implementation of unix and it runs on both PA and IA servers. It is a single address space monolithic kernel.

Responsibilities:

- Fix on HPUX vm defects
- Influence roadmaps for HPUX by deriving IPs from Tru64

✦ **Disk Communicator** using VC++. (<http://atacommunicator.sourceforge.net>)

✦ **ATA Device** handling and **FAT File System implementation** in C.

PERSONAL DETAILS:

Father's Name	:	Jacob
Date of Birth	:	13 th April 1979
Marital Status	:	Married
Nationality	:	Indian
Sports	:	Foot Ball, Cricket and Basket Ball
Hobby	:	Photography