RESUME

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Education

2010 - present   **PhD in Computer Science**   **Columbia University**

My research area is operating systems, specifically on mobile and embedded devices. I am working in the Software Systems Lab with a focus on virtualization technologies and operating system principles. My advisor is Jason Nieh. The PhD program consists of a breadth requirement (10 courses), teaching experience, candidacy exam, research, thesis proposal and thesis defense.

Achievements include:
- Developed OS-based virtualization solution for Android
- Introduce code review in COMS w4118 operating systems course
- Linux maintainer of KVM for ARM port.
- Ported Linux checkpoint/restart to ARM.

2008 - 2009   **MS. in Computer Science (GPA 4.06)**   **Columbia University**

At Columbia I followed classes and did research on virtualization. The program combined classical classroom education with research.

Achievements include:
- Started KVM for ARM project capable of running flat binaries inside the hypervisor.
- Formally verified virtualization primitives on KVM inside the Linux Kernel using model checking techniques.
- Worked on process virtualization Zap and desktop computer recorder DejaView.

2005 - 2008   **B.Sc. in Computer Science**   **Copenhagen University**

Computer Science and Mathematics.

Achievements include:
- B.Sc. Thesis on storage elements in grid computing.
- Project on recreational route planning in rural environments involving graph theory and optimization algorithms.

2003-2004   **Economics**   **Copenhagen University**

Studied one year of micro- and macroeconomics, financial math and accounting.

Publications and media

2011   "Cells: A Virtual Mobile Smartphone Architecture", Proceedings of the Twenty-third ACM Symposium on Operating Systems Principles (SOSP 2011), Cascais, Portugal. **Best Paper Award**

2011   "Cells: A Virtual Mobile Smartphone Architecture", Columbia University Technical Report, cucs-022-11, May 2011

2010	Danish newspaper article about ARM virtualization: *"Dansker virtualiserer ARM-processorer med Android og 150 linjer Python-kode"* in Version2 on November 11th, 2010.
2010	"KVM for ARM", Proceedings of the 12th Annual Linux Symposium, Ottawa, Canada, July 13-16, 2010.
2008	Storage Resource in the Minimum Intrusion Grid, B.Sc. Thesis, June 2008

Technical Skills

Expert	**C** and programming language
Expert	Python, Java, C#, VB.NET programming languages
Expert	Linux **kernel and driver development**
Expert	**ARM assembly**
Expert	ARM architectures including in-depth experience with **ARMv5, ARMv6** and **ARMv7** architecture versions.
Expert	ARM **Virtualization Extensions**, Cortex-A15, **ARM LPAE**
Expert	Virtualization technologies
Expert	**SQL** and **database technologies** (Oracle, MS SQL, MySql, SqlLite)
Expert	Bash, Regular Expressions, GNU Makefiles, AWK
Expert	Windows Programming, ASP.NET, SharePoint, Exchange Server Integration, Active Directory
Proficient	Objective-C and iPhone/iPad development
Proficient	C++
Proficient	Web-technologies (HTML, JS, CSS, Django, Umbraco)
Other	Excellent problem-solving and analytical skills
	Excellent at planning, documenting and communicating my work

Teaching Experience

2011	Operating Systems COMS w4118	**Columbia University** New York, USA
2005	Introductory math for business majors	**Copenhagen Business School**

Professional Activities

2010	Reviewer	**2nd Asia-Pacific Workshop on Systems 2011**
2010	Reviewer	**Usenix Annual Technical Conference 2011**

Professional Experience

2011 – 2012 **Apple vs. HTC (ITC 337-TA-797)**   **Consultant**
Source code review and claim construction.

2011 – 2012 **Consultant**   **Virtual Open Systems**
In Virtual Open Systems I am the developer and maintainer of the KVM for ARM open-source system based on Cortex-A15 and future generation multicore processors.

I am in charge of planning and implementing the hypervisor and assisting in the planning of services based on KVM technology, which is offered to clients.

2009 **External consultant**   **VMWare R&D**
The previous internship was quite successful, so we created a contract for 6 months of consulting on MVP after the summer internship ended.

2009 **Technical Intern**   **VMWare R&D**
As an intern in VMWare I worked on their Mobile Virtualization Platform (MVP). I did work on the hypervisor itself.

Achievements include:
- Scratch implementation of checkpoint/restart in a hypervisor.
- Researched x86-based ARM emulation solution for customers.

2006-2008 **Senior Developer**   **Carnegie Asset Management A/S**
Returned to Carnegie Asset Management as team leader of the developers in the department.

Achievements include:
- Planning and implementation of virtualized infrastructure including remote backup site maintenance.
- In charge of creating a development culture within the growing IT team. Focus on things like code review, SCM, SOA and library development in .NET.

2005-2006 **Consultant**   **First Treasury A/S**
Consultant for the clients of First Treasury, which consisted of Danish pension funds, mortgage companies and investment banks. Tasks ranged from software development to IT strategy consulting.

Achievements include:
- In charge of technical optimization of the financial system installation at one of the biggest Danish credit institutions. Successful outcome.
- Assisted customers in creating financial reporting solutions.
- Taught internal programming courses to other consultants.

2001- 2005 **Developer**   **Carnegie Asset Management A/S**
Developing applications for investment banking use concerning stock exchange

transactions, performance calculations and statistical calculations.

Achievements include:
- Developed and integrated an Early Warnings System, which monitored business critical transactions, servers, websites and more. The system used a directly attached mobile antenna to communicate with IT staff over mobile networks using SMS messages.
- Planned and implemented a complete financial data system integration solution between the offices in Luxemburg and Copenhagen. I managed the project involving many people, legal cross-country issues and technical challenges.

2001   **Developer**   **Netmester A/S**
Developing applications for the Danish Justice Department.

1998 – 2001 **Founder**   **Chazy IT**
Founded a small company that delivered web sites and infrastructure solutions.

Awards and Fellowships

2012   Finalist in the 2012 Qualcomm Innovation Fellowship Award

2011   2011 SOSP Best Paper Award for "Cells: A Virtual Mobile Smartphone Architecture"

2011   SOSP Student Scholarship from Akamai Technologies

2009   Reinhold W Jorck and Wife's Foundation Grant

2008   Rudolph Als' Foundation Grant

2008   The Nordea Foundation Grant

2008   Otto Monsteds Foundation Grant

2008   Henry and Mary Skovs Fellowship

2008   Henry Shaw's Fellowship

Additional information

Languages   Danish (mother tongue), English (fluent), German (high-school)

Interests   Music, movies, scuba diving, kayaking, travels, food.