Franck TALBART

92350 LE PLESSIS-ROBINSON, France
+33 6 88 12 29 06 http://franck.talbart.fr franck@talbart.fr

PROJECT MANAGER – SOFTWARE ENGINEER

CAREER JOB OBJECTIVE

To work on cutting-edge technologies and challenging tasks where I can efficiently contribute my skills to the growth of the project and build my professional career.

WORK EXPERIENCE

Since 11-2015 until today — **DDN Storage, MEUDON (FRANCE), MD (USA)**

Achievements : Design and development of a HPC (High Performance Computing) oriented framework to enable test automation on a burst buffer in a distributed environment. The tool includes a system deployment on Slurm and Amazon EC2, a complete API to execute arbitrary code and scripts remotely, a performance testing system, a chart generator and a defect reproducer.
(Python, Flask, SQLite, JQuery, C) ~35 000 lines of code

- Since 11-2015 : **Quality Assurance engineer**

In charge of the quality assurance of IME (Infinite Memory Engine), a burst buffer developed at DDN. Designed and developed a framework called Common Testing Framework (CTF). The tool is fully operational, and used in Maryland (USA), Pune (India), and Paris (France).

04-2010 - 10-2015 — **EXASCALE COMPUTING RESEARCH (Intel, CEA, GENCI, UVSQ), VERSAILLES**

Achievements : Design and implementation of the Codelet Tuning Infrastructure (CTI) tool. It is a repository management system for performance experiments.

CTI is built around the idea of multiple people wishing to share data and data processing techniques. The tool automates the analysis of applications and provides a clustering approach (data mining) to give optimization hints for a set of loops. To do so, the target application is compressed with its environment and sent to a target machine (supported modes: SSH, Slurm and a generic mode to manage other job managers) or the local machine. Then, the experiment is performed and the results are sent back to the user's machine and imported into the repositories in a unified way.

It incorporates a variety of plugins enabling loop detection, navigation and performance analysis (static and dynamic analysis of the application). A clustering approach is used to group loops based on their characteristics. Doing so, previous optimization techniques can be retrieved from the repository. After the automatic profiler step is done, an application engineer could present a hotspot and retrieve a similar loop from the database. It can contain information on optimization hints that previously provided a benefit for another application.
(Python, C, Bash, PHP, Elastic Search, SQLite) ~55 000 lines of code and 100 000 stored codelets
Website : https://github.com/franck-talbart/codelet_tuning_infrastructure/wiki

- 08-2011 - 10-2015 : **Technical leader**

In charge of the team management (engineers and interns, team size: 4 members), the executive recruitment and the research and development, in collaboration with Intel Research (Illinois) and CORIA (Rouen). Finished a stable release of CTI which is now publicly available as an open source software on the internet. The tool was deployed in the CORIA laboratory (Rouen) to provide performance monitoring (automatic generation of weekly reports presenting the last performance analysis of a combustion simulator). The results show the gradual impact of the latest updates for different datasets and architectures. The tool is also used internally for research purposes.

- 09-2010 - 07-2011 : **Expert engineer**

Designed and developed the repository infrastructure, and a first stable release was provided (analysis, design, implementation, maintenance).

- 04-2010 - 08-2010 : **Internship**

Studied the needs and implemented a first prototype of CTI. Had the opportunity to work with international researchers (Russian, American, Spanish).

Since 11-2009 until today — **ISTY, ENGINEERING SCHOOL, VERSAILLES**

➤ Since 12-2013 : **Teaching assistant, System Administration and UNIX**

Responsible for the System Administration lectures at the ISTY school (final year of the engineering curriculum) and the UNIX tutorials at the ISTY school (first year of the engineering curriculum).

➤ Since 03-2014 : **Internship co-ordinator**

➤ 11-2009 - 01-2010 : **C language tutor**

06-2009 - 09-2009 — **THALES SERVICES, SERVICE DESK, ELANCOURT**

➤ **Internship**

Developed a module for the automatic generation of resource planning and skills : design of an operational research algorithm. Research on user needs, specifications writing and software implementation.
(PHP, MySQL, SQL Server) ~7 000 lines of code

08-2006 & 08-2008 — **ESPACE PUBLIC MULTIMÉDIA, MAIRIE, DESCARTES**

➤ **Organizer**

Worked as a computer park network administrator and maintainer, and as a customer consultant.

04-2007 - 06-2007 — **THALES, SYSTÈMES AÉROPORTÉS, ELANCOURT**

➤ **Internship**

Updated a tool (Digibus and Video Exploitation SubSystem) used for the Mirage 2000.
(Delphi) ~ 3 000 lines of code

➤ EDUCATION

2010 — **ISTY, VERSAILLES**

Masters degree in Computer Science

European Masters degree in computer science, **ranked first during the three years**

2007 — **IUT D'ORSAY, ORSAY**

DUT Computer Science

Equivalent to second year of BSc Computer Science, **ranked 3/220**

2005 — **LYCÉE ST FRANÇOIS D'ASSISE, MONTIGNY-LE- BX**

Baccalauréat Scientifique

High School Diploma equivalent to A-level, with honours

➤ LANGUAGES

- **French :** Mother tongue
- **English :** Fluent

➤ SKILLS

- **Tools :** GIT, SVN, Docker, Jenkins, Redmine
- **Databases :** SQL language, PL/SQL, Oracle, MySQL, SQLite
- **Languages :** C, C++, C#, Shell, Delphi, Java (Hibernate, JDBC …), Python, UML
- **Methodologies :** Agile, Merise
- **Operating systems :** GNU/Linux distributions (especially Debian), Windows

➤ MISCELLANEOUS

- **Others :** Design of a framework used to control robots using the Raspberry Pi (C++, WebRTC, Gstreamer, Qt)
  Website : http://goo.gl/sZPtrd
- **Sports :** Tennis, swimming