

Krzysztof Napiontek

Nationality | Polish / EU

Date of Birth | 1975

Address | Monkstown, Ireland

Email | knapiontek@gmail.com

Phone | +353 86 842 4950

Ideal Role

- Related to Applied Mathematics
- Active software R & D
- C/C++11, Java7/8, Python or Matlab DEVELOPMENT
- Work in environment with TDD and QA and fully automated production process

Education

2001 - 2002 | University of Technology in Poznan Poland
1 Year of Phd in **Numeric Methods**

1996 - 2001 | University of Technology in Poznan Poland
Master of Science Engineer in Automatics and Robotics

1990 - 1995 | Technikum Elektroniczne in Bydgoszcz Poland
Secondary school specializes in **Electronics and Telecommunication**

Key Technical Skills

- **Java - 7+ years of commercial experience**
- **Python - 3+ years of commercial experience**
- **Matlab - 2+ years of commercial experience**
- **C/C++ - 10+ years of commercial experience**
- Strong front-end and back-end experience
- Strong debugging skills
- **Concurrent processing expert:** multi-threading or event-driven systems, also barriers and atomic operations
- 3D math expert (education Robotics, as a part of my master thesis I created 3D CAD system for FEM computations in OpenGL/Qt/Lua)
- Experience in computer simulations of Maxwell equations
- Very good GIS experience (3 years geographical map development)

Tools

- Linux, Solaris enthusiast
- JavaScript, jQuery, Bootstrap, Flask, NodeJS, Struts, JSP, Jinja
- SQL Databases - MS SQL Server, Oracle, MySQL
- Object Databases - Hibernate, db4o, MongoDB, Redis, Berkley DB
- AWS EC2, PySpark
- Maven, Ant, git, Subversion, Makefile
- Eclipse, IntelliJ, PyCharm, Emacs, Vi
- Jenkins, Bamboo, JIRA

Resources

- Web site: <http://knapiontek.github.io>
- C++ standard library: <https://github.com/knapiontek/therion/tree/master/lite/src/core>
- LALR(1) parser: <https://github.com/knapiontek/therion/tree/master/therion1/src/langen>
- Eternity II: <https://github.com/knapiontek/therion/tree/master/eternity>
- Finite Element Method: <https://github.com/knapiontek/therion/tree/master/fem>
- Lite - compiler based on LLVM: <https://github.com/knapiontek/therion/tree/master/lite>

Employment Experience

Merrill Lynch Ireland (Dublin)

Python Developer.

Tasks:

09/2016 -
present

- Migration of the legacy system. Task required creating scripts transferring data to the new model. I proposed successful automation process which has saved hundreds of customer hours.
- Creating solutions for users (UI, back-end) which require working with: Flask, Tornado, Netezza SQL, PyCharm, Sandra Object DB, Toad, Jinja using Python, javascript, html etc.

NuoDB Ireland (Dublin)

The SQL database for the cloud. First truly distributed database supporting SQL.

Tasks:

07/2015 -
08/2016

- Design and implementation of system security based on TLS. Supported by JDK7/8.
- Sophisticated JAVA test for failover of the distributed database engine. Running in Docker and AWS EC2 using AWS API
- Improvement and design of **Python** test framework. Adding Python integration tests for new C++/Java features.
- Implementing new features to the SQL Python client.
- Design and implementation of LDAP authentication in C++. Supported by OpenLDAP for Linux, Mac, Windows (Active Directory).

Micro Focus (formerly IONA Technologies, Dublin)

Micro Focus delivers middleware solutions. Main products are Orbix and Artix. Orbix is the leading implementation of CORBA. Artix is successor of Orbix and is based on Web Services and implements ESB. All products support Java and C++ technologies

Main responsibilities:

11/2007 -
06/2015

- Enhancing Load Balancer functionality. It required to collect some network statistics to find the most appropriate sever node.
- Design and implementation of http chunked transfer encoding. Required to improve network latency.
- Implementation of plugins for Actional (web based monitoring tool) and Orbix CORBA server. (C++, Java)
- Rebuilding test framework. Replacing Makefile, Ant, Perl with Maven and bits of Python
- Mantainace of existing code. Bugfixes and debugging.
- Introducing Jenkins support for the test framework.

Platforms: SunOS, Linux, Windows, HP-UX, AIX

Aircraft Management Technologies (Malahide, Ireland)

AMT delivers specific aircraft software solutions for airlines. The main focus of the system is management and replication of distributed databases where connections between airborne planes and the airport server is not always guaranteed. The system optimizes a connection price (SAT, GPRS, GSM, Wireless) and an amount of data to achieve minimum costs and maximum usability.

Technology: Java with JNI back-end for specific protocols and for embeded environment.

Involved in:

08/2004 -
10/2007

- Development of a server front-end based on web application (Tomcat, JSP, javascript, jQuery, HTML, ajax, Hibernate)
- Design and implementation of a subscription and publishing data system (XPath filters define data flow between aircrafts and ground server)
- Design and implementation of a large content management system (transport of files by means of available media and protocols)
- Significant improvement of speed of the system core (migration from JDBC-based client to PL/SQL procedures - avoiding unnecessary network traffic, further optimisation)
- Adaptation of the company software to the Boeing hardware (JNI)
- Embedding Java applications in an OS environment (Windows and Linux API)

Systherm-Info (Poznan, Poland)

09/2001 -
06/2004 Main revenue stream - distributed spatial data systems for government departments (numeric maps, GIS and database applications). The primary project was a spatial data manager. The system created a graphics view of remote databases. User was obtaining current or past state of the reality. The system had ability of simultaneous work with a few databases (SQL Server, Oracle and Pervasive) all at once. The system had a general mechanism to extend the interface for a new kind of a database.

Involved in:

- Design and implementation of multidimensional index for specific GIS applications (indexing vector objects in a storage)
- Design and implementation of a drawing system (fast geometric algorithms)
- Design and implementation of transport layer (in-house protocol for GIS data)
- Replication and data merging system (i.e. merging two map snapshots of different time-stamp)

- High level UI functions for manual data input

Xnet Communications (Poland, German subsidiary)

The company specialized in network communication. Tasks related to implementation of systems controlling data flow in the network (e.g. acquisition of data from distributed cash-registers). The central unit of the system was an FTP server and a scheduler. The engine was configured with Lua scripts (see lua.org).

06/1999 –

09/2001 Involved in:

- Implementation of distributed file management system (core and GUI)
- Implementation of transport layer based on modems
- Implementation of the FTP client and extensions of FTP server
- SMTP implementation

Languages

- English - fluent
- Polski - native
- Español - learning

Interests

- Rock Climbing, Kitesurfing
- Applied Mathematics

References

- Available on request