

## **SEBASTIEN DROUYER**

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### **EDUCATION**

INSA LYON (IF) - Lyon, France

Institut National des Sciences Appliquées de Lyon / National Institute of Applied Sciences of Lyon

Master's Degree in Computer Science, September 2008 - June 2011

School ranked 3 / 126 in French engineering schools according to the Usine Nouvelle newspaper <sup>1</sup>

INSA ROUEN (SIB) - Rouen, France

Institut National des Sciences Appliquées de Rouen / National Institute of Applied Sciences of Rouen

Preparatory school, September 2006 - June 2008

International section (half the courses were taught in English)

School ranked 53 / 126 in French engineering schools according to the Usine Nouvelle newspaper <sup>1</sup>

LFKL - Kuala Lumpur, Malaysia

Lycée Français de Kuala Lumpur / French School of Kuala Lumpur (High school)

French Core curriculum in science and technology with honours (Singapore), September 2004 - June 2006

### **EXPERIENCE**

RESEARCH AND DEVELOPMENT ENGINEER - Novius, Lyon, France

December 2010 - Present

- Conception and implementation of an Enterprise social software, ResoNova<sup>2</sup>. Used internally as well as by various customers such as banks (Banque postale) or Research Institutes (Bioaster). I also trained two developers to enable them to configure and extend the software. Technical support.
- Conception and implementation of an open source Content Management System named Novius OS<sup>3</sup>. Part of the core team, composed by 3 engineers and the Chief Information Officer. The software was used by the company developers to implement new websites. I also trained 12 developers and took part in the redaction of the online documentation<sup>4</sup> as well as in the open-source community management.
- FuelPHP (open source PHP framework) contributor, trainer and speaker. Trained internal development teams. Conference speaker (see presentations section).

RUBY ON RAILS DEVELOPER (INTERNSHIP) - Safecom, Bangkok, Thailand

June 2010 - October 2010

- Implemented new functionalities and improved performances to a Customer Relationship Management system named Peppercan<sup>5</sup>.
- Consultant at Venda, reviewed tickets in order to improve performance and customer satisfaction.

UNITY DEVELOPER (INTERNSHIP) - Lumai Prod, Bangkok, Thailand

June 2009 - August 2009

- Implemented new functionalities and improved performances to a Wii video game.

### **PRESENTATIONS**

FUELPHP: A FRAMEWORK, YES - AUTOMAGIC, NO!

French conference introducing the FuelPHP framework<sup>6</sup>

- November 2012: PHPTour event in Nantes, France<sup>7</sup>
- July 2012: Libre Software Meeting event in Geneva, Switzerland<sup>8</sup>.

## CONTESTS AND AWARDS

### INTEL PERCEPTUAL COMPUTING CHALLENGE: FINALIST + STILL ONGOING

June 2013 - September 2013

International software creation contest (750 finalists <sup>9</sup> ).

Conception and implementation of a software maximizing the Intel Perceptual Computing SDK <sup>9</sup> (gesture tracking, face tracking, voice recognition) : my entry was Perceptual Earth Facts <sup>10</sup>.

**Winnings: Creative\* Interactive Gesture Camera (worth \$149) for now + still ongoing**

### NASA TOURNAMENT LAB - ROBONAUT CHALLENGE: 2ND AND 1ST PLACE <sup>11</sup>

May 2013

International TopCoder marathon challenge (1190 registrants, 40 competitors <sup>11 12</sup> ).

2nd on original contest, 1st on the extended contest.

Conception and implementation of a vision algorithm capable of detecting leds and buttons on a taskboard.

The algorithm is intended for Robonaut 2, an humanoid robot NASA wants to send to the ISS in order to assist astronauts<sup>13</sup>

**Winnings: \$3900**

### NASA TOURNAMENT LAB - LONGERON CHALLENGE: 17TH PLACE <sup>14</sup>

January 2013 - February 2013

International TopCoder marathon challenge (4056 registrants, 459 competitors <sup>12 14</sup> ).

Conception and implementation of an algorithm optimizing the ISS solar collectors positions in order to maximize the generated power<sup>15</sup>

### GITHUB GAME OFF: 1ST PLACE <sup>16</sup>

November 2012

International game creation contest (1300 registrants, 200 competitors <sup>16</sup> ).

Conception, design and implementation of a web unity game<sup>17</sup>

**Winnings: Mac Mini (worth \$700)**

### NASA TOURNAMENT LAB - USPTO ALGORITHM CHALLENGE: 6TH PLACE <sup>18</sup>

March 2012 - April 2012

International TopCoder marathon challenge (150 registered, 28 competitors <sup>12 18</sup> ).

Conception and implementation of a vision algorithm capable of detecting figures and their labels on a patent paper<sup>19</sup>

### INFOTEL MOBILE APPLICATION CONTEST: 2ND PLACE <sup>20</sup>

February 2011 - May 2011

National Student contest (15 competitors teams).

Conception, design and implementation of a mobile application allowing the users to buy eco-responsible food <sup>20</sup>

**Winnings: Galaxy Tab (worth \$400)**

### INFOTEL WEB APPLICATION CONTEST: 1ST PLACE <sup>21</sup>

January 2010 - May 2010

National Student contest (15 competitors teams).

Conception, design and implementation of a web application allowing to store and manage documents. I used the open-source software Tesseract (OCR recognition) in order to transform scanned forms (pictures) into usable data <sup>21</sup>

**Winnings: Toshiba Tecra computer (worth \$1000)**

## MASSIVE OPEN ONLINE COURSES

COURSERA - UNIVERSITY OF WASHINGTON: COMPUTATIONAL NEUROSCIENCE<sup>22</sup>

Mai 2013 - June 2013: Statement of Accomplishment (97%)

COURSERA - UNIVERSITY OF EDINBURGH: ARTIFICIAL INTELLIGENCE PLANNING<sup>23</sup>

February 2013 - March 2013: Statement of Accomplishment (97.6%, with distinction, 98th percentile of passing students)

COURSERA - STANFORD: ALGORITHM, DESIGN AND ANALYSIS, PART 1<sup>24</sup>

February 2013 - March 2013: Statement of Accomplishment (97%)

COURSERA - BERKELEY: SAAS

February 2012 - April 2012: Statement of Accomplishment (73%)

COURSERA - STANFORD: MACHINE LEARNING<sup>25</sup>

October 2011 - January 2012: Statement of Accomplishment (100%)

## HOBBIES AND MISCELLANEOUS

Travels:

- Lived 6 years in Damascus, Syria
- Lived 3 years in Kuala Lumpur, Malaysia
- Lived 1 year in Bangkok, Thailand
- Visited more than 20 countries mainly in Asia and Europe

Open-source author and contributor<sup>26</sup>. Most popular / important (more than 10 projects):

- Author of jquery.earth-3d: JQuery plugin that allows you to draw a beautiful 3d spinning earth on canvas<sup>27</sup>
- Author of jquery.serialize-hash: JQuery plugin that returns a hash from serialization of a form<sup>28</sup>
- jugglingdb (Nodejs ORM) core contributor<sup>29</sup>

Piano: 10 years, Lyon and Nice national conservatories of music

Bodybuilding

Bicycle

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Notes

<sup>1</sup>Usine Nouvelle's online ranking: <http://www.usinenouvelle.com/comparatif-des-ecoles-d-ingenieurs-2013> (french)

<sup>2</sup>ResoNova's website: <http://www.resonova.fr> (french)

<sup>3</sup>Novius OS' website: <http://www.novius-os.org/> (english)

Novius OS' youtube channel (presentation videos): <https://www.youtube.com/user/NoviusOS> (english)

<sup>4</sup>Novius OS documentation website: <http://docs.novius-os.org/> (english)

<sup>5</sup>Peppercan's website: <http://www.peppercan.com/> (english)

<sup>6</sup>FuelPHP conference' slides: <http://www.slideshare.net/novius-os/rml-2012-conference-fuelphp> (french)

<sup>7</sup>FuelPHP conference's audio recording: <http://youtu.be/TbIFqYwz-SI> (french)

<sup>8</sup>FuelPHP conference's video recording: <http://youtu.be/BbmZiJpTGSY> (french)

<sup>9</sup>Intel Perceptual computing challenge's website: <https://perceptualchallenge.intel.com/> (english)

<sup>10</sup>Perceptual Earth Facts' presentation video: <http://youtu.be/k2dnIk.JhJyk> (english)  
Perceptual Earth Facts' text presentation: <http://drouyer.com/perceptual-challenge/perceptual-earth-facts/help.jpg> (english)

<sup>11</sup>Original contest rankings: <http://community.topcoder.com/longcontest/stats/?module=ViewOverview&rd=15652>  
Original contest registrants: <http://community.topcoder.com/longcontest/?module=ViewProblemStatement?module=ViewRegistrants&rd=15652>  
Extended contest rankings: <http://community.topcoder.com/longcontest/stats/?module=ViewOverview&rd=15611>  
Extended contest registrants: <http://community.topcoder.com/longcontest/?module=ViewProblemStatement?module=ViewRegistrants&rd=15611>

<sup>12</sup>In TopCoder competitions: Registrants are people who subscribed to the contest, but did not necessarily submitted anything. Competitors are people whose submission was accepted (sent on time, compilation successful, respected limitations...).

<sup>13</sup>Contest's presentation video: <http://youtu.be/uXZllyJohAI>  
Contest's problem statement: <http://www.topcoder.com/iss/robonaut/>

<sup>14</sup>Contest rankings: <http://community.topcoder.com/longcontest/stats/?module=ViewOverview&rd=15520>  
Contest registrants: <http://community.topcoder.com/longcontest/?module=ViewProblemStatement?module=ViewRegistrants&rd=15520>

<sup>15</sup>Contest's presentation video: <http://youtu.be/qiFDrwnUgUc> (english)  
Contest's problem statement: <http://www.topcoder.com/iss/longeron/> (english)

<sup>16</sup>Contest's winners: <http://github.com/blog/1337-github-game-off-winners> (english)

<sup>17</sup>Contest's description: <https://github.com/blog/1303-github-game-off> (english)  
My contest entry: <http://sebastien.drouyer.com/hotfix/> (english)

<sup>18</sup>Contest rankings: <http://community.topcoder.com/longcontest/stats/?module=ViewOverview&rd=15087>  
Contest registrants: <http://community.topcoder.com/longcontest/?module=ViewProblemStatement?module=ViewRegistrants&rd=15087>

<sup>19</sup>Problem statement: <http://community.topcoder.com/longcontest/?module=ViewProblemStatement&rd=15087&pm=11839> (english)

<sup>20</sup>Contest webpage (subject + rankings): <http://www.infotel.com/rejoignez-nous/concours-etudiants/concours-2010-2011/> (french)

<sup>21</sup>Contest webpage (subject + rankings): <http://www.infotel.com/rejoignez-nous/concours-etudiants/concours-2009-2010/> (french)

<sup>22</sup>Course website: <https://www.coursera.org/course/compneuro> (english)

<sup>23</sup>Course website: <https://www.coursera.org/course/aiplan> (english)

<sup>24</sup>Course website: <https://www.coursera.org/course/aiplan> (english)

<sup>25</sup>Course website: <https://www.coursera.org/course/ml> (english)

<sup>26</sup>Github repositories: <https://github.com/sdrdis> (english)

<sup>27</sup>Presentation website: <http://sebastien.drouyer.com/jquery.earth-3d/> (english)

<sup>28</sup>Github repository: <https://github.com/sdrdis/jquery.serialize-hash> (english)

<sup>29</sup>Presentation website: <http://jugglingdb.co/> (english)