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RAPHAEL MERX

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• EDUCATION

UC Berkeley	**Berkeley, CA**	**May 2014**

Master of Engineering in Industrial Engineering and Operations Research

Ecole Centrale Paris	**Paris, France**	**June 2013**

- "Diplôme d'ingénieur" (equivalent of Master of Engineering)
  In the top 3 Engineering Schools among more than 200 in the country.
  Ranked in the top 10% of the School's students
- Second-year coursework: High performance computing; Random modeling; Queuing theory.
- First-year coursework: Computer Science; Statistics; Probability; Physics; Business Management.

lycee Louis Le Grand	**Paris, France**	**June 2011**

- MPSI – MP* ("classes préparatoires")
- Intensive two-year university level preparation in Maths and Physics for the highly competitive entrance exams to the French Grandes Ecoles.

WORK EXPERIENCES

Developer, Memoryclip (student project)	**Paris, France**	**Feb 2013 – June 2013**

"A new bookmarks manager: link URLs together for easier retrieval."
- Developed entirely a Chrome extension which enabled a 5x time gain for users.
- Designed the client-server interaction model for the website.
- Supervised the progress of the project (timing, final goals, step-by-step improvements).

Developer, Creage (student project)	**Paris, France**	**Sept 2012 – Feb 2013**

"A 3D web browsing experience"
- Worked with four other students and an expert in cognitive science.
- Created the spacing algorithm.
- Developed working knowledge in Lua (programming language).

Intern , Sunfor Sichuan Lightning	**Chengdu, China**	**Summer 2012**

- Worked in a factory of 150 employees
- Found a mathematical method that could be used regularly to improve productivity.
- Took intensive Chinese lessons for 3 weeks in Shanghai beforehand.

Apprentice , IBM	**Paris, France**	**Nov 2011 – June 2012**

- Worked in a consulting team of about 100 people.
- Found and implemented a software that eased communication between consultants.

Volunteer, Service Civil International	**Krnjak, Croatia**	**Summer 2011**

- Helped renovate a school destroyed during the Yugoslav Wars.
- Organized a show aimed at making inhabitants familiar with ethnic tolerance.

• COMPUTER SKILLS

Programming	Python, Java, SQL, Lua
Web dev	Javascript, PHP, HTML, CSS
Computation	R, Octave
MS Office	Excel, Powerpoint, Word

• LANGUAGE SKILLS

French	Native
Spanish	Intermediate level
German	Intermediate level
Chinese	Intermediate level

• EXTRACURRICULAR ACTIVITIES

- Interests : geopolitics, Asia, boxing (have been practicing at a competition level for five years)
- cHeer-uP! (student organization): Secretary-general. Help young adults who have cancer realize their projects.
- CeC (student organization): tutor in Math and Physics for disadvantaged high school students

Dear Mr Chaturvedula, Dear Mr Wroblewski,

The capstone projects that you propose are of very high interest to me on many levels. Let me first introduce myself. I did my undergraduate in France, where my curriculum has slowly deviated from pure mathematics to computer science. Last year, I became eager to specialize in data sciences, which led me to take two courses on Coursera: "Computing for Data Analysis" (Johns Hopkins U.) and "Machine Learning" (Stanford). I also became more and more willing to make a career in tech companies. With these background and interests, it was only natural for me to apply for a Master's degree in IEOR at Berkeley, next to Silicon Valley.

Last year, I took part in two five-month-long computer science projects that involved four other students from my university. I enjoyed working hard on these projects, both because I liked the everyday challenge of coding, and because they gave me valuable insights about how to work in a team on a long-term project. At the beginning of the second one, I realized how much the first had already taught me in terms of coding and group organization.

I am sure that these two experiences will help me cope better with the capstone project. Compared to where I was one year ago, I have a much clearer view of how to decompose a long-term computer science project into several sub-tasks. I think that this skill is key to the success of the project, since a group can lose a lot of time and energy because of a lack of organization.

I also think that my background in machine learning could prove very useful in working on these projects, especially the one that aims at detecting security beaches. After having gained an in-depth knowledge of Machine Learning through the course given on Coursera, I feel prepared to apply this knowledge in a long-term project.

Moreover, this project fits my general interest for technology. I enjoy finding out what already exists and discovering how other problems can be related to the one I have. Understanding the customer's attitude, conducting a market research, developing a business model, and adapting the prototype when the first tests are realized are many things that appeal to me.

In summary, I think that both my skills and my interests are matching perfectly the capstone project you are proposing. I really hope to work with you in the following year. Feel free to contact me for any further information, and thank you for reading this letter.