Memories of IAESTE internship in Madrid

A few words about my best vacations ever connected with interesting traineeship in Madrid. A lot of hard work but much more satisfaction, fun and unforgettable moments of my life…

Szczepan Kurnyta
LC IAESTE AGH
Student data

Name: Szczepan Kurnyta  
University: AGH University of Science and Technology  
Faculty: Electrical Engineering  
Specialization: Control Devices and Measurement Systems - Computer Engineering  
Internship after year: IV  
Company: Universidad Politecnico de Madrid - Ingeniería Electrónica ETSI Telecomunicación  
Department: Biomedical Image Technology lab.(BIT), www.die.upm.es/im  
Place: Madrid, Spain  
Language required: English (good)  
Other requirements: Programming experience, image processing background  
Previous training: Recommended  
Gross pay: 181.00 € per week

IAESTE Internship

I wasn’t sure about going for the internship this year… there was also the time when I started to think about my master thesis and I had many doubts about the subject. I was browsing the new offers of IAESTE internships 2007 rather for curiosity. I didn’t plan anything but suddenly I had found the offer related with my thesis! It was amazing because biomedical image processing is not very ordinary field of science. I thought that I should do my best to get this internship and I succeed. Two month later I received acceptance note from Madrid and I started to prepare for this journey.

Advises: Before you go to Spain…

There are at least two things which you should know before you go to Madrid. First is related with language. No matter what language is written on the offer, it’s really good to know Spanish. The true is that in Spain there are very little people who know English even in tourist agency or Local Committee of IAESTE it’s hard to communicate! Anyway I had some difficulties there and I didn’t know any word in Spanish but I survived☺

The second problem was about my gross pay. They took from my wages some tax(25%!). During my stay I couldn’t solve that problem even if I was fighting bravely for my rights. After vacation I received an information I would get this 25% back but I had to send them the Fiscal Certificate of Residence. So it’s good to take it with you if you are going to Spain for the internship. Friends in other companies didn’t have such problems.

Other suggestions: prepare for a hot weather and a great time.

The Kingdom of Spain and its capitol

Spain is situated on the Iberian Peninsula and bordered by Mediterranean Sea to the south and east, by the Cantabric Sea to the north, and by the Atlantic Ocean and Portugal to the west. Spanish territory also includes the Balearic and Canary Islands. Due to Spain's
geographical situation and orographic conditions, the climate is extremely diverse but even though during summer it’s very hot everywhere. The largest city and the capitol of the state is Madrid. It is a city of great cultural and political importance. While Madrid possesses a modern infrastructure, it has preserved the look and feel of many of its historic neighborhoods and streets. The entire population of the Madrid metropolitan area (urban area and suburbs) is calculated to be 5.84 million. Communication in such big city should be really well organize and it is. Serving the population of some six million, the Madrid Metro is one of the most extensive and fastest-growing metro networks in the world. I was using it to get to my place of work and it was really comfortable and reliable way of transportation.
Accommodation

Lodging arranged by IAESTE was more expensive than it was written on the offer, but the place where it was situated compensated everything. We were living in students flat at Gran Via, the street in the centre of Madrid. There were a lot of cinemas, theatres, clubs, and luxurious hotels. Just the center of cultural life and entertainment. That's why our flat was always the meeting place and the best site to party.

Place of work

Laboratory of Biomedical Image Technologies is one of the research groups at Telecommunication School at Universidad Politécnica de Madrid. The main objective of the group is to contribute to improve medical diagnosis by providing advanced biomedical image acquisition techniques, and image processing and analysis tools. Other objectives include teaching and training of doctorate and graduate students. Furthermore, laboratory cooperates with hospitals and research centers that can use developed techniques.
Duties

During the internship I was involved mainly in development and implementation of biomedical image processing algorithms, mostly related with PET (Positron Emission Tomography).

The internship lasts for 2 months. My work was to program in C++ and Interface Description Language. IDL is a program which can be used as an interface between different environments and enable easy image processing and make possibility of use functions written in C++.

At the beginning I was improving and optimizing algorithms of filtration of 2D and 3D images. This filters will be applied during the reconstruction process after PET tomography. I was working to form one project with the filters: Gaussian, Median, Diffusion. Except this I was creating programs with the implementation of Fourier Transformation.

Second month I spent on implementation and development of the algorithm named: Fourier Rebinning Algorithm(FORE), which main task is to transform the data written in sinograms to achieve three dimensional images with the examined objects. Sinograms are 4D sets of data, which come from the process of tomography. To review images I was using program named Amide which enables to display data before and after the reconstruction process.

Spanish tradition

If you are talking about anything from Spanish tradition you can’t omit some characteristic features.

Fiesta y siesta

These two words are strongly connected with Spanish culture. Name ‘fiesta’ they are using to describe weekend, party, festival, performance and so on…Everywhere is fiesta and of course these fiestas are always related with dancing, drinking and having a lot of fun. After whole night fiesta there come the time for whole day siesta. Sunday is perfect day for this. Siesta is also the name of time after lunch – something like two hours break for a nap.
Madrid as a capitol is free of this tradition but when you go to any other place you will see it for yourself. It’s amazing when all shops, supermarkets and institutions are being closed just after noon because of there liberty to rest after dinner.

Corrida

The English word for this event is bullfighting. We went to see it because being in Spain and not saying Corrida is something abnormal. But to be honest I didn’t like it. I thought it would be a fight. It turned out to be only killing the bull using different spears and ‘torero’ with the sword is just a final. There is a big controversy about this sport but supporters of bullfighting argue that it is a culturally important tradition.

Spanish food

Spanish cuisine is heavily influenced by seafood available from the waters that surround the country. I’m not a fan of meals consisting some strange animals but many times in university’s canteen I had an opportunity to taste calamares, shells and shrimps. On the other hand it took me about a month to force myself to eat them.
Valencia

I’m not the person who like sightseeing a lot but being on the internship is a perfect time to do some traveling without spending great amount of money for expensive trips. Madrid is in the centre of Iberian Peninsula so to every part of Spain the distance is not so big. I really wanted to go to the seaside so me and my girlfriend went for 2 days to Valencia. It’s about 300km from Madrid but it’s much hotter and has a beautiful cost. That was fantastic to see a sunrise at the beach. Valencia is developing very fast. One of the symbols of the city is modern “Town of Art and Science” but also historical part of the city was very nice with many famous cathedrals and museums.

Other students

What is always most interesting about the internship is the fellowship. In our flat all my stay there were about fifteen students from different exchanges. Most of them were like me from IAESTE program. The biggest amount of students was from Eastern Europe, especially from Balkans but also there where students from other parts of Europe, South America, Asia or Australia. I met so many great people that I won’t write about anyone especially. We spent a grate time working, partying, cooking, watching television and sightseeing. As I said
at the beginning I had best vacations ever with a fantastic company. I’m sure that some of my new friends will visit me in Poland soon or next year I'll go to one of theirs’ countries.

About LC IAESTE Madrid is not well organized. In fact I met two persons from the committee who were carrying about anything. Summer reception was organized by trainees but we had a lot of fun and I don’t regret anything.
Summary

It was my second internship but definitely the best one. I had much more serious job. Many times I had to work hard and stay longer but effects of work brought me a lot of satisfaction. What's more, things which I was doing were very interesting for me. Besides the fellowship, as I already said, was really great. I hope that my “Memories..” are enough to show that such exchange is a great occasion to acquire not common experience and travel wherever you like. If you have any doubts about going abroad with IAESTE the answer is: do your best to go, you won't regret it!

If you want to see more you can check my film from Spain on YouTube: http://www.youtube.com/watch?v=hxCmDxXvyWw

To see more photos visit: http://student.agh.edu.pl/~corvetta/MadridIAESTE2007/