

Gabriela May Lagunes

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Profile: I have a background in Physics and professional level skills in the fields of Data Science and Software Development. I have years of relevant experience in the planning, implementation and management of international development projects. I believe most of the biggest challenges of society can be solved through the appropriate and humane implementation of science and technology, as long as these are backed with effective policies that ensure the holistic development of everyone. I look forward to a career putting scientific knowledge into sustainability solutions and the protection of human dignity.

WORK AND RELEVANT EXPERIENCE

BBOXX, London, U.K.

06/2017 – Now

Software Developer (From October 2018 to Present)

- Full time developer at the Data Insight team. Responsibilities include: Supporting the development of in-house data science capabilities by developing prediction models of BBOXX's customers' behaviour by implementing machine learning algorithms in Python. Extracting data efficiently from web APIs and SQL databases, profiling raw data to refine user requirements, cleaning data using Python and pandas, monitoring and optimising the ETL pipelines using Airflow, making new tables and writing triggers in PL/SQL and staying up to date with the latest tech innovations and evaluate any that may improve the system.

Part Time Data Scientist (From September 2017 to October 2018)

- Python and SQL programming to collaborate in the development of BBOXX's Data Warehouse. Application of ETL processes, database management, and statistical methods to get insights from the company's available data.

Technical Summer Intern (From June to August 2017)

- Analysis of the available internal data of the company to understand and improve customer experience.
- Python programming, using pandas and APIs, to apply machine learning methods and statistical analysis in order to understand customer behaviour and improve the provided service.

EFID-UNICEF Summer School, Addis Ababa, Ethiopia

06/2017

Attended to a Summer School delivered as a joined effort between UNICEF Ethiopia and UCL, directed by Prof. Priti Parikh and Dr. Samuel Godfrey. The objective of the course was to deepen the students' knowledge in the implementation of large scale water security projects in developing countries, as well as the functioning of UN bodies.

Engineers Without Borders UCL, London, U.K.

08/2013 – 08/2017

From September 2013: First project. Rainwater-harvesting system project in San Miguel de Allende, Mexico.

- Objective: to install and repair 13 rainwater-harvesting systems in schools and clinics of the area.
- Achievements: Fundraising of over £10,000 in a year; provision of water security to over 450 users; ongoing project for over 3 years.

Appointed as **International Project Coordinator of the EWB UCL branch** (From August 2014 to August 2015)

- Supervision of 8 international projects and training of more than 40 new volunteers.

Appointed as **President of the EWB UCL branch** (From August 2015 to August 2016)

- Supervision of different projects in Mexico, Brazil, Mozambique, Kenya and The Philippines.
- Coordination of the social and outreach activities of the branch.
- Coordination of fundraising of the projects total budget (over £40,000).
- Communication of this group with the UCL Engineering Faculty and the EWB UK headquarters.
- Teaching support to the module 'Engineering for International Development' at UCL, lead by Prof. Priti Parikh.

Appointed as **Advisory Board Member** (From August 2016 to August 2017):

- Collaboration with Dr. Priti Parikh to establish the *Engineering For International Development* (EFID) center within the UCL Engineering Faculty.

University College London, London, U.K.

06/2016 -12/2016

Science Summer Exhibitor, event by the Royal Academy of Science: Quantum Secrets of Photosynthesis (July 2016)

- Volunteer in the UCL Physics and Astronomy stand of the SSE.
- Divulgarion of the quantum theory present on photosynthesis supervised by Dr. Alexandra Olaya-Castro

Undergraduate Teaching Assistant for *How to Change the World* from UCL STEaPP (June 2016)

- Support to the teaching team on this two-weeks program, in which undergraduate engineering students are given a sustainability challenge from real organizations (World Bank, Oxfam, etc.) and deliver a proposal of solution.

Undergraduate Teaching Assistant for CEGE204P: Environmental Building Design Scenario (10/2016 -12/2016)

- Support to the teaching team in the 2nd year Civil Engineering Scenario on Sustainability, run from December 12th to December 16th, 2016, under the supervision of Dr. Ilan Adler.

- Responsibilities: Delivery of presentation on field work on WASH solutions for rural communities in developing countries, preparation of educational material (e.g. presentations, diagrams, budgets.), delivery of verbal feedback to students while presenting their project partial advances.

Internship at UNAM Astronomy Institute, Ensenada, México

06/2012 – 07/2012

Summer Undergraduate Research Assistant

- Fortran programming and theoretical astrophysics knowledge was used to simulate the origin and evolution of the Solar System, specifically the dynamics involved in the formation of the Kuiper Belt during the early stages of the Solar System expansion.

EDUCATION

University College London – MSc in Engineering for International Development

2017 – 2018

Postgraduate taught degree completed with a *Distinction* focused on the theory and practices of the implementation of appropriate technologies and infrastructures for international development. Relevant projects within the masters include:

- Dissertation titled “*Climate Change Impacts Resilience of Water Infrastructure in Freetown*”, supervised by Dr. Luiza Campos and supported by the IMC Worldwide WASH team.
- Design of an energy efficient road integrated rainwater harvesting system to provide water security to the Kibera Slum in Kenya. Student project designed in partnership with KDI and Engineers Without Borders UK.
- Design and sustainability analysis, using livelihood and ASPIRE frameworks, of a centralised and decentralised water supply system for the Alang slum in India.
- Development of a theoretical modeled based on mass balance for a phytoremediation system in Maputo, Chile.
- Material Flow Analysis for appropriate waste management within the European union using Eurostat data and based on circular economy theory and principles.

University College London – MSci in Physics

2013 – 2017

Undergraduate *First Class Honours degree*, including a dissertation focused on Quantum Biology supervised by Dr. Alexandra Olaya-Castro

Awards gained during undergraduate studies:

- 2015 SWIG Awards (Sustainable Water Industry Group) – International Category
- C.A.R Taylor Prize: Best Performance in Communication Skills by UCL Department of Physics and Astronomy. Session 2014-2015
- UCL Beacon Bursary for Public Engagement 2013-2014 for EWB UCL Mexico Project.

CONFERENCES

Vatican Youth Symposium: Youth and the SGD’s - “Youth as Stewards of Our Planet for a More Fraternal and Supportive Society”, hosted by the Pontifical Academy of Science and SDSN Youth from the UN (October 2017).

- Participation as guest speaker on the role of young scientist in the fulfillment of the UN SDGs. Panel including: Prof. Jeffrey Sachs and H.E. Msgr Marcelo Sánchez Sorondo.

2017 Winter Youth Assembly at the United Nations Headquarters: Realizing the 2030 Agenda: Youth in Action hosted by Friendship Ambassadors Foundation (February 2017)

With youth at the core of the discussions, the conference aimed to highlight the interdependence and universality of the SDGs by exploring multifaceted global issues such as poverty, education, and sustainability.

Vatican Youth Symposium: Youth and the SGD’s - Challenges and Opportunities, hosted by the Pontifical Academy of Science and SDSN Youth from the UN (October 2016).

- Two-days event in which invited delegates presented current work on SDGs solutions and got feedback from high-profile stakeholders on sustainability, including Prof. Jeffrey Sachs and H.E. Msgr Marcelo Sánchez Sorondo.

Young Engineers Leadership Programme, hosted by the Royal Academy of Engineering (September 2016).

- First day. teamed up with engineers and development experts to design a sustainable energy solution for a refugee camp in Jordan. Second day. Attendance to the Royal Academy of Engineering event: Engineering a Better World. International development conference with high profile speakers.

GENERAL SKILLS

Computer Literacy: Object Oriented Languages: Python and Ruby. Experience with: SQL, Dockers, AWS Services, Apache Airflow, JavaScript, HTML, CSS, Test Driven Development and pair programming.

Languages: Fluent in English (Full Professional Proficiency), Spanish (Native Speaker) and French (Professional Working Proficiency).

General Skills: Teamwork, leadership, scheduling, budgeting, fundraising, public engagement, public speaking, networking, responsibilities’ allocation, programming, report writing, scientific solving problem thinking and awareness of the need of technology to achieve efficient results.

REFERENCES: Available upon request