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About me

I am an early career research scientist, who is passionate about industrial biotechnology, digital transformation, and bioengineering. I have 4+ years of experience in the field of protein, microbiology, and data science research. Besides, I have been closely involved with computational modeling tools, bioprocesses with an emphasis on waste management and recovery, as well as, process planning and biotech business development, which are crucial for the vaccine and pharma industry. I have strong experience working and leading multidisciplinary teams in Australia, Germany, South East Asia, UK, and Colombia.

Education

2016/01–2019/10. **University of Nottingham, Nottingham, United Kingdom**
Ph.D. Chemical Engineering

2010/07–2011/12. **Queensland University of Technology, Brisbane, Australia**
Master of Biotechnology

2006/01–2010-08. **University of La Sabana, Bogotá, Colombia**
Bachelor of Bioengineering

Experience

2020/10 – Current. **Business Development & Emerging market access**
SeSaM Biotech GmbH, Aachen, Germany
Achievements: Established an international collaboration with Biomatters design in Lithuania to increase our business portfolio. Developed new businesses in the Americas with Levapan S.A. and University level. Increase in the gross income of 100,000 €.

Responsibilities:
- Create new business by direct contact P2P or B2B approach
- Managed the resources, milestones, and funding of marketing projects
- Apply to external funding bodies for additional funds.

2019/11 – Current. **Research scientist**
Institute of Biotechnology, RWTH Aachen, Aachen, Germany
Achievements: Construction of a new biochemical synthetic pathway to produce dihydroxyacetone. Optimized yields of reaction with response surface and D optimal analysis. Engineered new protein candidates with Bayesian methods, ROSETTA, and FOLDX. Managed a budget of 400,000 €.

Responsibilities:
- Computational design of enzyme engineering workflows
- Rational design of new to nature enzymes with promiscuous activities
- Project management in Germany and China (scientific work packages).

2019/06–2019/10. **Data Analyst**

Asia Affinity Holdings Ltd. Kuala Lumpur, Malaysia

Achievements: Developed a database to facilitate financial record keeping within four subsidiaries (Japan, Hong Kong, Malaysia, and Indonesia). Created a deep learning approach of the most prevalent diseases in Indonesia (2007-2017), as a tool to predict disease evolution for personalized medicine and life insurance purposes.

Responsibilities:
- Develop flowcharts and process flows of roles and departments within the companies
- Process Big data; clean datasets, develop machine learning models, and statistics with Python.
- Report results with plots and figures

2015/01–2019/10. **Ph.D. graduate research assistant**

The University of Nottingham, Nottingham, UK

The University of Nottingham, Kuala Lumpur, Malaysia

Achievements:
- Implement big data analysis tools for clustered numeric analysis
- Managed the resources, milestones, and funding of the project
- Apply to external funding bodies for additional funds
- Prepare scientific documents highlighting the results of the project (published 2 international journal papers)
- Present and communicate the research project outcomes to non-scientific audiences
- Establish partnerships between University and industry for potential collaborations

2013/07–2014/12. **Course Coordinator of Agricultural Business Management**

CUN - Corporación Unificada Nacional de Educación Superior, Bogotá, Colombia

Achievements:
- Signed collaboration agreements with 20 different companies for consultancy and internship alliances among farmers schools, and industry.
- Introduced a new virtual education platform to achieve the regional impact of the program for rural areas.
- Led the academic license renewal for another 10 years.

2011/01–2011/03. **Joint Researcher**

Institute of Health and Biomedical Innovation (IHBI), Brisbane, Australia.

Achievements:
- Contribute to biochemical analysis to develop a molecular non-invasive diagnosis tool to detect breast cancer with Elisa – Kits.

Computational skills

Python (basic), R, Molecular Dynamics, Gaussian, Project management Data analysis, and UNIX commands

Languages

Spanish (Native), English (Bilingual), French (Basic), and German (Low-intermediate)

Interests

Jungle trekking, boxing, CrossFit, scuba diving, soccer/football, and reading