Linnaeus Bundalian

CONTACT

Email : linnaeusbundalian@gmail.com
Phone : +33648003816
Website : linnaeusbundalian.com

EDUCATION

Universitat Leipzig , Germany
Phd Student 2021 - Present

TECH Universidad Tecnologica , Mexico (Online)
Master in Nutritonal Genomics 2022 - Present

Ecole Centrale de Lille , France
M.Eng., Biomedical Engineering 2019 - 2021

Lyceum of the Philippines University (LPU), Calamba, Laguna
BSc in Computer Engineering 2009 - 2014

SCHOLASTIC AND OTHER ACHIEVEMENTS

- Department of Science and Technology Scholarship - Philippines (DOST) - 2019
- DOST - Data Science Scholarship - 2020.
- Continental Temics Electronics Scholarhip - 2012.
- University Scholarship - 2009 .
- Dean's List (High performing University Students) - GPA 1.64 (1 as the highest)
- Ranked 1st out of 19 Students of his specialization
- TOEIC Language Test 900/990 2014.

PUBLICATIONS

Altered gene expression profiles impair the nervous system development in individuals with 15q13. 3 microdeletion; *2022*

Obesity–An Update on the Basic Pathophysiology and Review of Recent Therapeutic Advances; *Vol. 11 Biomolecules, 2021*

Type 1 Fuzzy Logic Classification of Pain Severity (Pain Assessment); *6th International Conference Humanoid, Nanotechnology, Information Technology Communication and Control, Environment and Management (HNICEM), 2013*

RESEARCH EXPERIENCES

Inference of miRNA Expression in Single Cell level Feb 2021 - Jul 2021
Guide: Laurent Guyon (INSERM, France)
This project intend to investigate the correlation between mRNA and miRNA to be able to build a model predicting miRNA expression in single cell level.

COURSE PROJECTS

Monte Carlo Simulation of Photon Transport in Biological Tissue Dec 2019 - Jan 2020
Guide: Yanick Dusch, Centrale Lille
The objective of this project is to simulate how photons are transported in biological tissues for biomedical applications. The simulation was implemented through Monte Carlo Method on top of Python development environment. .

Optical Pulse Oximeter Design Dec 2019 - Jan 2020
Guide: Marc Goueygou (IEMN), Centrale Lille
The project is aimed to create a custom photoplethysmography device for measuring the oxygen saturation and pulse rate of a patient.

Finger Orthosis for EDS Patients Jan 2020 - Feb 2020
Guide: Olivier Mayeur (BioTIM), Centrale Lille
The end goal is to create a orthosis to address the need of Ehler-Danlos patients (EDS) by providing a constraint on their hypermobile joints.

Characterization of Mechanical Properties of Bladder Tissue May 2020 - June 2020
Guide: Laure Astruc (BioTIM), Centrale Lille

A project designed to model the complex mechanical properties of sof tissues (i.e. bladder). Characterization was done using image processing of dataset from a custom tensile stress machine in the BioTIM laboratory.

Optimization of Foot Prosthesis Design June 2020 - July 2020
Guide: Olivier Mayeur (BioTIM), Centrale Lille

This project aimed to gather and compare existing designs of foot prosthesis, checking their ergonomic and mechanical efficiency through simulation. The observations from the simulation are used to come up with an innovative design addressing the common problems among the other designs.

Anthromorphic EMG-driven Prosthetic Arm Oct 2020 - Jan 2021
Guide: Olivier Mayeur (BioTIM), Centrale Lille

A design for a prosthetic arm was created aimed to address the need of a responsive arm replacement for amputees.

Fetal Head Modelling for Simulated Delivery Jan 2021 - Feb 2021
Guide: Olivier Mayeur (BioTIM), Centrale Lille

The aim of the project was to create a 3D fetal head model that can mimic the mechanical properties of fontanelles.

Professional Experiences (Industry)

Scientific Researcher - Institute of Human Genetics, Leipzig, Germany Aug 2021 - present

- Build bioinformatic pipeline for upstream and downstream analyses
- Analyze genomic data and its association to biological processes and phenotypes

Chief Operations Officer - SPACECrop, Budapest, Hungary Jan 2022 - present

- Analyze user requirements
- Translate user requirements to software requirements and specification
- Manage the tasks and activities to meet the deliverables
- Manage and prepare the sprints and monitor the project's progress
- Define metrics to quantify project progress

Backend Developer - SPACECrop, Budapest, Hungary Jan 2021 - Dec 2021

Aids in creating the backend services and creating a predictive model for soil moisture requirement of farms in Hungary.

Backend Developer - VCG Global, Philippines June 2020 - August 2021

Created the RESTful APIs bridging the Web user interface to the backend services, records and database.

Software developer - RCaldo Consultancy, Batangas, Philippines Dec 2017 - Sept 2019

Aids in creating the backend services for web application and IoT systems.

Test Engineer - Continental Temic, Philippines Jun 2014 - Oct 2020

- Monitor machine performance which includes but not limited to First Pass Yield (FPY), Overall efficiency (OEE) and Process Capability.
- Develop and maintain test programs for machines and products.
- Train people in operating machines and performing failure analysis.
- Perform analysis on test data and failed parts.

Software Developer - Freelance, Philippines Nov 2013 - Oct 2020

Created software applications running on top of different platforms (desktop, web, IoT/MCU)

Other Trainings

- Genomics Virtual Lab (Pine Biotech) - 2020
- Next Generation Sequencing (Arkelin Philippines) - 2019
- Data Science Summer School (Lviv, Ukraine) - 2020
- PROJECT SPARTA PH: Data Science Track - 2020
- Bioinformatics Specialization (UCSD Coursera) - 2020
- Genomics Data Science (JHU Coursera) - 2020
- Data Science (JHU Coursera) - 2021
- Drug and Development Science (JHU Coursera) - 2021

Skills

Bioinformatics
Gene databases, TCGA, RNA sequence analysis, Single Cell Analysis, Bioconductor, GSEA, BioJulia, BioPython, Differential Expression Analysis

Programming
R, Python, C#, .NET, VBA, C, C++, MATLAB, .NET Core, CVI, Rust, Julia

Electronics
LTSpice, Circuit design and simulation,Amplification, Filtering, Arduino, Raspberry Pi, IoT

Database Management
RDBMS, SQL scripting in MS Access, MySQL, Oracleand Microsoft SQL

CAD
OnShape, AutoCAD, CATIA

Web Development
HTML5, CSS3, ASP.NET MVC and Web Forms, WebAPI2, Bootstrap, jQuery, AJAX

Others
Finite state modelling (Simscale, COMSOL, Abaqus), Fuzzy Logic Tool Box, Vibration test, CAN analysis, Supervised machine learning

Language

Filipino (native), English (2nd language), German (Beginner), French (Beginner)