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Guillaume Jeanneret

Biomedical Engineer

About me

Biomedical Engineering with complementary studies on Mathematics and Computational Mathematics from the Universidad de los Andes in Bogotá, Colombia. Native Spanish speaker, fluent in French and advanced English level. Learns fast, is capable of working in group and adapts easily to different work environments. Special interest and focus on Computer Vision algorithms such as Artificial Neural Networks. Areas of Interest: Computer Vision (Artificial Intelligence), Data Analysis, Statistics and Applied Mathematics (Biological Modeling and Simulation).

Experience

January 2018 - May 2018: Graduate Teaching Assistant

I was the teacher of the laboratory of scientific programming. I was in charge of making, grading and teaching.

August 2017 - December 2017: Image Processing and Analysis course Assistant

I was in charge of filling in the questions database of each exam. Also, I was in charge in creating learning questions each course so the students can have a more dynamical and helpful problem based learning.

June 2015 - December 2015: Lab and Teachers assistant for the subject: Algorithms and Object Oriented Programming I

- Helping in the teaching of the basics for Object Oriented Programming in Java
- Support the teacher with the evaluation of the students laboratory reports and tests, taking into account the requirements for each one.
- Manage and dictate the laboratory programming sessions.

August 2015 - Present: Assistant for the Biomedical Engineering Introduction Subject

Helping and giving support to the students in different subjects such as chemistry, physics, calculus and object oriented programming. This requires having good knowledge of the previously mentioned subjects in order to be able to help the students.

Education

2013-Present:University

Cursing 8th semester of Biomedical Engineering and minor in Mathematics and Computational Mathematics at the Universidad de los Andes, Bogotá.

2013

Maturité Suisse
Swiss High School Degree

gota



Academic Experience - Relevant courses

MTBI REU summer program 2017 - Arizona State University This course for undergraduates develops the students through educational, research and mentorship activities. This program has intensive research training so undergraduates students can approach the life of a researcher. This course is fractioned into two segments: the first month is an intensive course of dynamical systems, where basic epidemiological models are explained and analytical tools are explained to reach a higher understanding of a given system. Also, programming frameworks are taught where programs such as R, Mathematica and MatLab are used. The second month, a research was carried out where I made, along my comrades, the The Dynamics of Math Anxiety as it is Transferred through Peer and Teacher Interactions project.

Computer Vision

This advanced course gives a theoretical and practical applications of computational analysis for segmentation, classification and reconstruction, creating quantitative information from pictures or videos. This course teaches themes in: image Features, clustering, grouping -contour detections and object proposals-, classification -SVM- and recognition -semantic segmentation-. Some actual tools for processing, like Deep Learning/Convolutional Neuronal Networks, are taught.

Biomedical Systems Modeling and Simulation

This course gives the basis on the construction of biological models in continuum and discrete temporal spaces based on information given by the literature. Furthermore, stability of the systems are analyzed. Additionally, discrete models are simulated using the software Matlab.

Scientific Programming

This was the first approach to MatLab as coding environment. The subject taught the basic mechanics, algorithms and coding language that MatLab uses through different projects in the semester; these projects tackled common problems like numerical differentiation and integration, numerical differential equations, interpolation and extrapolation, among others.

Projects

- The Dynamics of Math Anxiety as it is Transferred through Peer and Teacher Interactions (MTBI 2017)
- Puzzle solver algorithm based on an picture of each piece using geometrical features.
- Two diseases SIR model with vital dynamics and *Interaction* between the systems.
- Participation on the Innovation Challenge at the Universidad de los Andes, Bogota, Colombia (Biomedical Engineer 2017)

- Actually is working on an algorithm to detect Lung Nodules on Tomographies.

Software

- MatLab (Advanced)
- Java (Medium)
- R (Basic)
- Latex (Medium)
- Excel (Medium)