SUEMY INAGAKI

Brooklyn, New York

+1 516 968 1704 - suemy.inagaki@nyu.edu

https://suemyinagaki.github.io/

Languages   Portuguese, English, Japanese and Spanish.

Github : SuemyInagaki **Linkedin** : in/suemy-inagaki

EDUCATION

PhD in Computer Science - New York University   09/2023 - Now
Visualization and Data Analytics Research Center (VIDA). Advisor: Prof. Claudio Silva
Research Interests: Artificial Intelligence, Augmented Reality, Human Computer Interaction, Computer Graphics.

B.S in Computer Engineering - Pontifical Catholic University of Rio de Janeiro   03/2018 - 12/2022
Minor: **Mathematics**
Undergraduate thesis: **DC-UNet for white matter lesions segmentation.** Advisor: Prof. Marcelo Gattass.

Exchange Program in Computer Engineering - Autonomous University of Madrid (Spain)   01/2020 - 07/2020

RESEARCH EXPERIENCE

Research Assistant - NYU   09/2023 - Now
I'm working on a multidisciplinary project that involves augmented reality (using Microsoft Hololens 2), object detection, visualization and data processing using point clouds. My main task currently is to reconstruct the environment in real time using point cloud data generated by Hololens 2. To achieve this, some challenges involve removing objects that are not part of the scene (such as the user's hand and utensils that are on the table). (Python)

Undergraduate Research Intern - PUC-Rio   06/2022 - 12/2022
We developed a model of neural networks with DC-UNet architecture for the segmentation of lesions in white matter in brain MRI images. Some steps of the pre-processing involved removing the skull and histogram matching. For the model, we chose the Tversky loss function due to the small amount of data set available. The project title is **DC-UNet for white matter lesions segmentation** and it will be publicly available on the university website shortly. Advisor: Prof. Marcelo Gattass.

Undergraduate Research Intern - KAUST   06/2021 - 11/2021
KAUST Robotics, Intelligent Systems, and Control Lab - Saudi Arabia (Advisor: Prof. Shinkyu Park)
Designed a deep learning model with LSTM layers. The model trained one-armed robot to gesticulate like humans (hello, bye, go ahead and stop). The model's input is a video of a human moving its arms and the output is a list of angles of each joint of the one-armed robot frame by frame. Then, we can use this result to the simulation of the robot in the pybullet environment. During the project, I used the concepts of legibility and predictability of a robot's movements and how I could transcribe the movements of a human - with two arms - to a non-humanoid robot with only one arm. This work will allow good cooperative work as research advances. *Link to the presentation*

Undergraduate Research Intern - PUC-Rio   04/2018 - 08/2021
Computer Graphics, Geometry and Modeling Group. (Advisor: Prof. Sinesio Pesco)
I worked on a research project sponsored by Petrobras, Brazil's leading oil and gas company. It was a group with undergraduate, masters and doctoral students, where we developed an oil reservoirs simulation using the C++. My contribution was with the implementation of the simulation of oil channels that exist inside the reservoirs. Starting from an image of the channel as input, I used erosion techniques to generate the three-dimensional model of the channel and then placed the simulation inside the model developed by the group. This project was used by the company for the studies of the reservoirs they were researching.(C++/OpenGL). *Link to posters. Link to conference paper.*

INDUSTRY EXPERIENCE

Data Engineer - Hurb   07/2022 - 08/2023
I worked as a data engineer in the Data & Analytics team developing data pipelines in both batch and streaming. I mainly used Google Cloud services like Dataflow, Pub/Sub and BigQuery and also open-source systems like Airflow and Airbyte. My main mission was to make the data consistently available to the company, as it would be used for decision making, data analysis and creation of machine learning models. (Python, SQL)

Software Engineer Intern - VTEX   12/2021 - 06/2022
I used React and Typescript to add a feature to users' *My Cards* page. Whenever the user wants to save a credit card in their account, a screen will open asking the user to authenticate with the card issuer. It is a safety step that European legislation requires (Called Strong Customer Authentication - SCA). With this implementation, I unlocked the use of the 'My Cards' tool for European merchants who are VTEX customers.

Software Engineer Intern - IBM   02/2021 - 08/2021

Manual regression testing and automated testing with Cypress. Also worked on the development of the front-end of an application that served to organize the IBM's internal store. Used Angular and Vue.

TEACHING ASSISTANT

Newtonian Mechanics   07/2018 - 07/2019, Three consecutive semesters, starting in the first year of undergrad. I hold office hours and solved newtonian mechanics exercises in classes.

Programming in C   08/2019 - 12/2019 and 08/2020 - 12/2020. I hold office hours and recitation sessions of C language programming classes.

CONFERENCE PAPERS

3D Modeling Of Turbiditic Channels Within Lobes From 2D Models   SIBGRAPI 2018

It was the result of work done with Professor Sinesio Pesco.

TOOLS AND INTERESTS

Tools   Python, C and C++ (6 years); Dart/Flutter (2 years); Java, Javascript, Pytorch and Tensorflow (2 years).
Interests   Artificial Intelligence; Augmented Reality; Human Computer Interaction; Computer Graphics;

EXTRACURRICULAR ACTIVITIES

KAUST WEP Undergraduate Poster Competition Research Presentation (Saudi Arabia)   01/2019

My undergraduate research poster was accepted in a poster competition at KAUST's Winter Enrichment Program.

SIBGRAPI Undergraduate Poster Competition Research Presentation (Brazil)   10/2018

SIBGRAPI is the largest international computer graphics conference based in Brazil

HONORS AND AWARDS

Santander Scholarship   01/2020

I was one of 4 undergraduate students from across my university who were selected to receive the scholarship for a one-semester exchange program in Spain - Autonomous University of Madrid.

Third place in the CNMAC programming contest   09/2019

I participated in a programming competition at the national congress of applied and computational mathematics (CNMAC) and came in third place.

Maratona Behind the Code   08/2019

I was one of the 100 finalists out of more than 27,000 participants in the programming marathon promoted by IBM. There were 10 challenges whose solutions involved the IBM Cloud. Some themes of the challenges were: chatbot development, natural language processing, sentiment analysis in texts, Internet of Things and machine learning models for predicting potential customers.

Undergraduate Scholarship   03/2018-12/2022

I received scholarship due to my excellent performance in the entrance exam and my vulnerable financial condition.