GABRIEL MIRANDA DE ARAUJO
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EXPERIENCE

Computer vision lab graduate research participation

Graduate Research, 4/23 - Present
Supervised by Professor Xiaohui Xie, PhD, University of California - Irvine

- Developing deep model for three dimensional anatomy reconstruction of colon from colonoscopy video; Based on the work by Liu et. al. (https://arxiv.org/pdf/2003.08502.pdf)
- Developed optimization framework for image registration based on the work by Chen et. al. (https://www.sciencedirect.com/science/article/pii/S1361841522002432)
    - Current project pre-print: https://arxiv.org/abs/2311.15497
- Developing a Generative Hand-Object-Interaction model based on GeneOH

Manipulation of hierarchical segmentation of images based on saliency maps

Final undergraduate dissertation, 3/20 - 1/21
Supervised by Professor Paulo Miranda, PhD, IME-USP

- Developed a segmentation model utilizing both the quasi-flat zone and max-tree volume attributes as criteria to rearrange a designated image hierarchy
- Dissertation: https://linux.ime.usp.br/~gaabriel/mac0499/monografia
- Based on the work by Cousty et. al. (https://link.springer.com/article/10.1007/s10851-017-0768-7)

Research on AI system for breast cancer screening

Supervised undergraduate researcher, 4/19 - 8/20
Supervised by Professor Hae Yong Kim, PhD from the Polytechnique School (POLI/USP)

- Co-author of published paper at ASCO (American Society of Clinical Oncology): "**Evaluation of an AI system for breast cancer screening in mammograms of young women**" https://meetinglibrary.asco.org/record/187282/abstract
- Aided in development of neural networks, utilizing Keras/PyTorch packages for the general framework
- Responsible for development of image pre-processing techniques for maximizing efficiency in batch image training
- Coordinated development of the project along with members of USP's School of Medicine (FMUSP)

Research on a neural network implementation of the INACITY platform

Supervised undergraduate researcher, 6/18 - 3/19
Supervised by Roberto Hirata, PhD

- Development for a neural network implementation of the INACITY platform
- Utilized the Keras package for the general framework
- Attended InterSCity's 2nd Workshop São Paulo, Brazil

EDUCATION

University of California, Irvine (UCI)
Masters in Computer Science
California, USA (2022 - 2024)
GPA: 3.95

University of São Paulo (USP)
Bachelor in Computer Science
São Paulo, Brazil (2017 – 2021)

Languages: Portuguese (Native), English (Fluent), Spanish (Advanced)
Programming Languages: Python, Rust, C, C++, Java
Other Interests: Sports (Bodybuilding, Brazilian Jiu-Jitsu), Cooking, Hiking, Botanics & Gardening