Master's Thesis Project in Biomedical Visualization

The **Biomedical Image Informatics Group** at the VRVis Forschungs-GmbH in Vienna, Austria, tackles biomedical image informatics challenges in a friendly and inspiring atmosphere by (pre-)processing, analyzing and visualizing large amounts of image data from medicine and biotechnology.

Currently, we are looking for support from a student (f/m/d) who would like to give her/his master's thesis an application driven focus with the following topic:

Neuron Signature Visualization

Neuroscience is focused on understanding how the brain functions both structurally as well as functionally. This is accomplished by imaging brains using a variety of different methods including EM, confocal, LM, etc. The challenge is to identify neurons across these images to understand how the brain develops throughout an organism's life.

The aim of this master's thesis project is to push the state of the art in searching for neurons through exploration and evaluation of different methods of exploring similarities between neurons.

Task

You will need to implement at least two algorithms/visualizations and compare them against the state of the art solution. The goal is to integrate your solution/code into the larger Larvalbrain system.

What you will bring to the team

- Bachelor's degree in computing, informatics, data science or a similar area
- Interest in biomedical visualization
- Knowledge of image processing toolkits (OpenCV, Scikit-image, juliaimages, etc.)
- Programming skills in programming language of your choice

What we offer in return

- Very friendly and supportive work atmosphere
- Flexible working hours and well-equipped workplace
- Excellent professional support by our team
- Opportunity to access our network of university partners (e.g. for thesis supervision)
- Opportunity for female researchers to join the Women in Visual Computing Network hosted by our colleagues
- Appropriate remuneration upon successful thesis completion

Applications are always welcome!

Please contact Thomas Torsney-Weir to send in your application or to inquire about additional information.

We especially would like to encourage female students to apply!

Contact

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