ROKAS BENDIKAS

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RESUME OBJECTIVE

- **4+ years** of experience in **Software Engineering**, developing **Data Processing Pipelines** and **Machine Learning models**.
- **2+ years** of experience in **Deep Reinforcement Learning** for Robotic Control applications.
- **4+ years** of General Research Experience, which includes writing and reviewing papers.

EDUCATION

07/2021 – 07/2025 **Doctorate of Philosophy (PhD) in Foundational AI, University College London**
Thesis: Leveraging motion priors for successful surgical manipulation in complex environments.
Supervisors: Prof. Danail Stoyanov, Dr. Dimitrios Kanoulas.

07/2020 – 07/2021 **Master's of Science (MSc) in Computing (AI + ML), Imperial College London**
Thesis: Imagination augmented Deep Q-Network: End-to-end robotic control in dynamically complex environments.
Supervisors: Prof. Andrew Davison, Dr. Edward Johns.
Grade: Pass with Merit.

07/2017 – 07/2020 **Bachelors of Engineering (BEng) in Biomedical Engineering, King's College London**
Thesis: Investigating the Effects of Atrial Anatomy and Fibrosis on Atrial Fibrillation Mechanisms using Biophysical Modelling and Deep Learning.
Supervisors: Prof. Steven Niederer, Dr. Caroline Roney.
Grade: 1st Class Honours.

WORK AND EXPERIENCE

04/2017 – Current **Web Developer, UAB Ribena, Lithuania**
- Managing the current website (https://www.ribena.lt).
- Developing a new real-estate management platform (Stealth).

Tools: HTML, CSS, JS, WordPress, React, Django, Git.

06/2022 – 09/2022 **Software Engineering Intern (Deep Learning), MathWorks, United Kingdom**
- Extended the Deep Learning Toolbox with a Standard Deviation method, which is supported by the Automatic Differentiation engine and can be used to build custom normalization layers.
- Investigated the performance of Deep Learning inference block in Simulink. Compiled a report, that was used in the direction setting meeting, defining the plan of the company for the next two years.

Tools: MATLAB, Perforce, Git.

02/2022 – 05/2022 **Graduate Teaching Assistant, Reinforcement Learning, UCL (+DeepMind)**
- Module taught by Prof. Hado Van Hasselt (UCL, DeepMind).
- Marked the coursework.

02/2022 – 05/2022 **Graduate Teaching Assistant, Robotic Control Theory and Systems, UCL**
- Led the lab sessions (2 hours a week).
- Developed and marked the coursework.

Tools: MATLAB, Simulink.

08/2021 – 12/2022 **Research assistant, CEMRG, St. Thomas Hospital, United Kingdom**
- Developed a semi-automatic pipeline for atrial DT-MRI/LGE data segmentation and registration, which is implemented in the CEMRG App.
- Designed and trained a CNN which maps atrial anatomy and fibrosis data onto action potential phase singularity map.

Tools: MATLAB, Python, PyTorch

Selected Publications

Constructing a human atrial fibre atlas
Roney, Caroline H., Bendikas, Rokas, Pashakhanloo, Farhad, Corrado, Cesare, Vigmond, Edward J., McVeigh, Elliot R., Trayanova, Natalia A., and Niederer, Steven A.
Annals of Biomedical Engineering, 2021

In silico Comparison of Left Atrial Ablation Techniques That Target the Anatomical, Structural, and Electrical Substrates of Atrial Fibrillation
Roney, Caroline H., Beach, Marianne L., Mehta, Arihant M., Sim, Iain, Corrado, Cesare, Bendikas, Rokas, Solis-Lemus, Jose A., Razeghi, Orod, Whitaker, John, O'Neill, Louisa, Plank, Gernot, Vigmond, Edward, Williams, Steven E., O'Neill, Mark D., and Niederer, Steven A.
Frontiers in Physiology, 2020

Constructing Virtual Patient Cohorts for Simulating Atrial Fibrillation Ablation
Roney, Caroline H, Beach, Marianne, Mehta, Arihant, Sim, Iain, Corrado, Cesare, Bendikas, Rokas, Solis-Lemus, Jose A, Razeghi, Orod, Whitaker, John, O'Neill, Louisa, Plank, Gernot, Vigmond, Edward, Williams, Steven E, O'Neill, Mark D, and Niederer, Steven A
Computing in Cardiology, 2020

Technical skills

Languages: Python (strong), MATLAB (strong), C++ (medium), HTML (medium), CSS (medium), JavaScript (basic), SQL (basic).

Machine Learning: PyTorch, scikit-learn, MATLAB Deep Learning Toolbox.

Web Development: React, Django.

Others: Git, ROS.