



Henry Proudhon
CNRS research director
Centre des Matériaux, MINES ParisTech
63-65 rue Henri desbruères, BP 87
F-91003 EVRY Cedex, France
henry.proudhon@mines-paristech.fr

January 18, 2021

Recommendation of Mr. João P. C. Bertoldo

To whom it may concern:

I'm writing this letter to support the application of Mr. Bertoldo. I am a CNRS researcher in Centre des Matériaux MINES Paristech developing new multimodal X-ray-based characterizations for structural materials. I'm leading the BIGMECA chair, a research initiative between MINES ParisTech and Safran to develop AI-based methods in Mechanics of Materials, notably using X-ray images of microstructure and defects. It is in this framework that I proposed Mr. Bertoldo to work on *deep learning for automated segmentation of tomographic images*, and he started in late September 2020.

João was very dedicated to his work and achieved publication-ready results in just three months. During this time, he proved to already be an autonomous thinker and managed his project on his own, asking for guidance whenever needed. I also wanted to mention the excellent programming skills of Mr. Bertoldo; he seems to be able to take down any problem thrown at him. João rank within the top 3% of the students I had to supervise; if I had the funding to propose a Ph.D. thesis to João in his field, it would do it immediately.

João has been a great asset to my group; I did not hesitate to propose to João to contribute to the doctoral course *Computer vision and machine learning for the material scientist*¹, and he accepted enthusiastically.

I very strongly recommend the application of Mr. Bertoldo for a Ph.D. position in data science. Do not hesitate to contact me for further information.

Sincerely,
Henry Proudhon

A handwritten signature in black ink, appearing to read "HProudhon", with a long horizontal line extending from the end.

¹http://dms.mat.mines-paristech.fr/Donnees/data05/503-CVML_new_2021.pdf