



OctoAI: Federated Learning and Edge-Enabled AI for Intelligent Energy Systems

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Looking for a Ph.D. position in Federated Learning? Interested in learning the HOWTOs of AI on Edge?

Topic

Current IoT (Internet of Things) solutions for energy systems in smart buildings depend almost exclusively on cloud infrastructure and cloud-based services. In the OctoAI project, we are developing the next generation of high-performance Edge AI (Artificial Intelligence) for intelligent energy systems by combining concepts of Transfer and Federated Learning.

Your Background

We are looking for motivated and talented applicants with good university degrees (M.Sc. or equivalent) in Computer Science (or comparable fields), and with solid background or willingness to learn the following topics:

- ✂ Machine Learning concepts (e.g., Federated Learning)
- ✂ Embedded Computing (e.g., μ Controller programming)
- ✂ Federated Learning (e.g., Tensorflow Federated, OpenFL)

Who are we looking for

Candidates should be keen on working with teams of experts and project partners. Primarily, you must be/have:

Must have

- ✂ can-do/will-do attitude
- 📄 fluent in English (oral and written)
- 💡 critical thinker and a problem solver
- 💡 independent and organized team-player
- 📄 capable of continuous progress reports (written)
- 💡 enthusiastic about Intelligent Energy Systems

We extremely encourage applicants with the following skill-sets to apply:

Nice to have skills

- ✂ Neural Architectural Search (NAS) for Prediction Networks
- ✂ Quantizing and Deploying NNs on Edge (e.g., RPi, Jetson)
- ✂ Implementing TinyML on microControllers (e.g., MCUNet)

Application

Please apply by sending the following documents electronically (as a single PDF file) to the emails listed in the contact section. Please note that our mail servers most likely refuse files other than PDFs.

- 📄 Curriculum Vitae
- 📄 Research Statement
- 📄 your Master's Thesis
- 📄 List of subjects studied (with grades)
- 📄 2–3 Recommendation letters

🏠 Funding

The position is funded by the Austrian Research Promotion Agency (FFG), full-time, for two years with an extension possibility. The contract will be under the collective agreement for university employees at TU Graz. An inclusive environment and balancing family and career are important to our group and university. We encourage women to apply.

📄 Contract

- ✅ **Position:** Prä-Doc. Project Assistant
- ✅ **Monthly salary:** €3.058,60 Brutto
- ✅ **Commitment:** Ph.D. Thesis
- ✅ **Weekly hours:** 40 hours

📅 Starting Time

Starting time can be as soon as possible, but some degree of flexibility is possible.

📞 Contact

In case of questions, don't hesitate to contact us for more information.

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