# Tristan Cinquin

## Personal Information


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| Address | Kornhausstrasse 12, Tübingen, Germany |
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## Education

*10/22 -* **University of Tübingen - International Max Planck Research School for Intelligent Systems**, Germany.
PhD in probabilistic machine learning supervised by Prof. Robert Bamler and Prof. Vincent Fortuin.

*09/19 - 06/22* **Swiss Federal Institute of Technology Zürich (ETHZ)**, Switzerland, Master in Computer Science.

*08/18 - 06/19* **University of Illinois at Urbana-Champaign (UIUC)**, USA, Exchange Year in Computer Science.

*09/15 - 06/19* **Swiss Federal Institute of Technology Lausanne (EPFL)**, Switzerland
Bachelor in Communication Systems (2016 - 2019) & Micro-engineering (2015).

## Work Experience

*10/21 - 05/22* **Amazon**, Applied Scientist Intern, Berlin, Germany
- Investigated Bayesian inference methods in gradient boosting machines to obtain well calibrated predictive uncertainty on tabular data for applications to contextual multi-armed bandits.

*03/21 - 06/21* **ETHZ**, Teacher Assistant in Machine Perception, Zurich, Switzerland
- Prepared deep learning programming tutorials for exercise sessions.

*06/19 - 08/19* **Natixis**, Quantitative Analyst Intern, Paris, France
- Introduced to financial markets and the process of pricing equity derivatives.
- Research to write the SR07-11 report to document the Pricer of a financial product.
- Introduction to machine learning for financial markets.

*09/16 - 07/18* **EPFL Junior Enterprise**, Project Manager, Lausanne, Switezland
- Project Management: met clients, identified their needs, established offers and contracts, monitored projects, payment.
- Translation Services: prospected clients, constant search to improve service and efficiency.
- Trained on negotiation skills, prospecting and selling services.

*09/17 - 07/18* **EPFL**, Teacher Assistant in Mathematics & Digital System Design, Lausanne, Switzerland
- Provided tutoring to help students understand lectures, complete exercises and lab work. Assisted professors in grading.

## Projects

*03/21 - 10/21* **The Bayesian Transformer**, Master Thesis
Applied approximate Bayesian inference methods on the transformer to obtain well calibrated predictive uncertainty.

*03/20 - 07/20* **Human Motion Prediction with Synthetic Self-Attention**
Developed a Transformer model to predict the next frames of a skeleton given a sequence of past frames.

*03/20 - 07/20* **Road segmentation with Meta-Learning**
Used the MAML meta-learning framework to learn to segment roads from aerial images scrapped from Google Maps.

## Publications

*NeurIPS 2024* **FSP-Laplace: Function-Space Priors for the Laplace Approximation in Bayesian Deep Learning**, Tristan Cinquin, Marvin Pförtner, Vincent Fortuin, Philipp Hennig, Robert Bamler.

*Pre-print* **Regularized KL-Divergence for Well-Defined Function-Space Variational Inference in Bayesian neural networks**, Tristan Cinquin, Robert Bamler.

*AISTATS 2023* **Variational boosted trees**, Tristan Cinquin, Philipp Schmidt, Tammo Rukat, Martin Wistuba, Artur Bekasov.
Proceedings of the 26$^{th}$ International Conference on Artificial Intelligence and Statistics 2023, Valencia, Spain.

*NeurIPS 2021* **Pathologies in priors and inference for Bayesian transformers**, Tristan Cinquin, Alexander Immer, Max Horn, Vincent Fortuin.
Bayesian Deep Learning Workshop, 35$^{th}$ Conference on Neural Information Processing Systems, December 2021.

*ICASSP 2021* **Unsupervised Musical Timbre Transfer for Notification Sounds**, Jing Yang, Tristan Cinquin, Gábor Sörös.
Proceedings of the 46$^{th}$ International Conference on Acoustics, Speech and Signal Processing. IEEE, Toronto, Canada, June 2021.

## Skills

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| Programming | Proficient in Python, advanced in C, Java, Scala & SQL, good in C++/C#.<br>Strong knowledge of PyTorch, TensorFlow, JAX, Numpy, Scipy, Pandas & Scikit Learn Python Libraries. |
| Languages | Bilingual in French and English, German level A2, French and Canadian nationality. |

## Areas of Interest

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| Passions | Probabilisitc machine learning, deep reinforcement learning and programming. |
| Hackathons | Harvard MakeHarvard 2019, ETH ACE Datathon 2019, Imperial college Algothon 2021. |
| Sports | Tennis, cycling, running, squash. |
| Volunteering | Association Massabielle (05/2022-06/2022). |