

Shuailong Zhu

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EDUCATION

Master of Computer Science <i>Ecole Polytechnique Fédérale de Lausanne (EPFL)</i> – Selected Courses: Learning Theory, Advanced Algorithm, Probability and Stochastic Calculus, TCP/IP Networking	Sept.2022–present <i>Lausanne, Switezerland</i>
Bachelor of Electrical Engineering <i>Zhejiang University</i> – Online Summer School at University of California, Davis (Jul.2021-Aug.2021) – Selected Courses: PDE, Optimization Algorithm, Operating System, Principles of Communication, Signal Analysis and Processing	Sept.2018–Aug.2022 <i>Hangzhou, China</i>
Diploma of High School <i>Changjun High School</i>	Sept.2015–Aug.2018 <i>Changsha, China</i>

RESEARCH EXPERIENCE

Implicit Bias of Scale Factor in Attention Layer <i>Advisor: Prof. Lénaïc Chizat</i> We focused on the influence of scale factor on single-layer transformer (attention layer) and empirically showed that $\frac{1}{\sqrt{m}}$ factor leads to convergence between the training dynamics of two parameterizations, W-param and KQ-param.	Sept.2023-Jan.2024 <i>Semester Project, EPFL</i>
Theoretical Aspects of Neural Network Pruning <i>Advisor: Prof. Lénaïc Chizat</i> We focused on applying different sampling strategies and optimization techniques on neural network pruning and analyzing their performance theoretically and experimentally. Particularly, we got a $O(\frac{1}{n^2})$ asymptotic convergence bound for conditional gradient methods for pruning.	Mar.2023-Jun.2023 <i>Semester Project, EPFL</i>
Disentangled Control for 3D-aware Face Image Generation <i>Advisor: Prof. Yiyi Liao</i> We introduced weak supervision through encoded coefficients from 3DMM with ACGAN loss, to our base model, Pi-GAN, which resulted in more fine-grained control in image synthesis while maintaining view-consistency.	Feb.2022-Aug.2022 <i>Bachelor Thesis, Zhejiang University</i>

TEACHING EXPERIENCE

Teaching Assistant <i>Computer Vision, taught by Prof. Pascal Fua</i>	Feb.2024-Jun.2024 (expected) <i>EPFL</i>
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LAUGUAGE AND SKILLS

Language: Chinese(mother tongue), English(C1)
Programming Skills: python (Pytorch, numpy, huggingface), C++, matlab, verilog, html