

# Ali Garjani

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## Education

- 2021-Present **EPFL (École Polytechnique Fédérale de Lausanne)**, *Switzerland*,  
MSc. Computational Science and Engineering,  
GPA: 5.53/6
- 2017-2021 **Sharif University of Technology**, *Iran*,  
BCs. Computer Engineering,  
GPA: 19.08/20 (Top 10%)

## Publications

- 2023 **Scaling Vision Models to Tens of Tasks and Modalities**,  
*Roman Bachmann\**, *Oğuzhan Fatih Kar\**, *David Mizrahi\**, **Ali Garjani**, *Mingfei Gao*, *David Griffiths*, *Jiaming Hu*, *Afshin Dehghan*, *Amir Zamir*,  
Under Review  
[\[Website\]](#)
- 2022 **Neural Distributed Image Compression using Common Information**,  
*Nitish Mital\**, *Ezgi Özyılkan\**, **Ali Garjani\***, *Deniz Gunduz*,  
Data Compression Conference (DCC), 2022, [\[arXiv\]](#), [\[GitHub\]](#)
- 2022 **Neural Distributed Image Compression with Cross-Attention Feature Alignment**,  
*Nitish Mital\**, *Ezgi Özyılkan\**, **Ali Garjani\***, *Deniz Gunduz*,  
Workshop on Applications of Computer Vision (WACV), 2023, [\[arXiv\]](#), [\[GitHub\]](#)
- 2021 **Forecasting Influenza Hemagglutinin Mutations Through the Lens of Anomaly Detection**,  
**Ali Garjani**, *Atoosa Malemir Chegini*, *Mohammadreza Salehi*, *Alireza Tabibzadeh*, *Parastoo Yousefi*, *Mohammad Hossein Razizadeh*, *Moein Esghaei*, *Maryam Esghaei*, *Mohammad Hossein Rohban*,  
Scientific Reports Journal - **Nature**, 2023, [\[arXiv\]](#), [\[GitHub\]](#)

\* Equal Contribution

## Research Experience

- 2023 **Research Lab Assistant at Visual Intelligence and Learning Lab**, *EPFL*,  
Feb - Present Advised by Prof. [Amir Zamir](#),  
Project: [4M: Massively Multimodal Masked Modeling](#)

- 2022-2023 **Research Project at Image and Visual Representation Lab, EPFL,**  
Advised by Prof. [Sabine Süsstrunk](#),  
Project: Generalization of [Neural Cellular Automata for Texture Synthesis](#)
- 2021-2022 **Remote Research Intern at Information Processing and Communications Lab,**  
*Imperial College London,*  
Advised by Prof. [Deniz Gunduz](#),  
Project: Neural Distributed Image Compression using Common Information

## — Honors and Awards

- Academic Excellence Award, Iran's National Elites Foundation (2018-2021).
- Ranked 126<sup>th</sup> in nation-wide Iranian Universities Entrance Examination among more than 148000 participants (2017).

## — Work Experience

- 2022 **Data Science Intern at Jules Gonin Eye Hospital,** <https://www.ophtalmique.ch>,  
Trained a model to predict a disease recurrence in patients using their [OCT scans](#).

## — Skills

Machine Learning	Diffusion Models, Tokenization, Distributed Training
Library	Pytorch, Tensorflow, Ray Serve, Selenium
Software	Blender, Unreal Engine, Adobe
Frameworks	Git, Docker, Django, Android Studio, React Native
Math	Numerical Partial Differential Equations, Functional Analysis, Complex Dynamical Systems
Programming Languages	Python, C++, C, Java, Swift, R, Javascript, Matlab