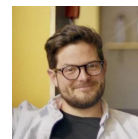# VÉSTEINN SNÆBJARNARSON

+41-77 259 14 62 / +354-66 33 727 | vesteinnsnaebjarnarson@gmail.com | vesteinn.is | github.com/vesteinn

EDUCATION

University of Copenhagen, Pioneer Centre for Artificial Intelligence — Copenhagen, Denmark
ELLIS PhD Fellow in Computer Science — *Autumn 2022 -*
- Advised by Serge Belongie, co-advised by Ryan Cotterell at ETH Zürich.
- Focus on cross-modal transfer learning and fine-grained generative modeling.

University of Iceland — Reykjavík, Iceland
MS in Computer Science - First Class with Distinction — *October 2021*
- Thesis on Question Answering (QA) for Icelandic. Cross-lingual open QA system developed and adapted to an Icelandic-only system.

University of Iceland — Reykjavík, Iceland
BA in Philosophy - First Class — *June 2012*

University of Iceland — Reykjavík, Iceland
BS in Mathematics - First Class — *October 2011*

EXPERIENCE

Visiting Researcher — September 2023 – August 2024
ETH Zürich — *Zürich, Switzerland*
- One year stay at Rycolab.
- Work on, among other things, connecting formal languages and neural language models, as well as cross-modal transfer.

NLP Researcher / CTO — November 2019 – February 2023
Miðeind ehf - Language technology — *Reykjavík, Iceland*
- Currently part-time consulting on TrustLLM Horizon Europe project.
- Promoted to CTO in autumn 2021.
- General purpose and customized machine translation systems.
- Training and analysis of language models, monolingual and cross-lingual.
- Development of various core NLP tools for Icelandic.

Senior Developer — January 2018 – October 2019
Trackwell ehf — *Reykjavík, Iceland*
- Full-stack web development for fleet- and human-resource management solutions.
- Modernised systems. Front-ends written in react and containerization of back-end systems.
- Designed multi-tenancy solution for separated clients that had previously been running on multiple servers.

Developer / PM / CTO — August 2012 – March 2017
Cooori ehf – Icelandic / Japanese ed-tech company — *Tokyo, Japan*
- CTO from 2015.
- Ed-tech company. Pivoted from teaching Japanese to a global audience to teaching English in Japan.

Bioinformatics Research Assistant — February 2010 – August 2012
University of Iceland, Faculty of Life and Environmental Sciences — *Reykjavík, Iceland*
- Assembled and analyzed genomic, transcriptomic, and epigenetic data, mainly in lichens.
- Developed methods for handling assembly of metagenomic samples using multiple sequencing types.

Teaching

Advanced Topics in Machine Learning | *TA, ETH Zürich*	Autumn 2024
Vision and Image Processing | *TA, University of Copenhagen*	Autumn 2023
Mathematical Analysis and Probability Theory | *TA, University of Copenhagen*	Autumn 2023
Introduction to Language Technology | *Head Teacher, University of Iceland*	Autumn 2021

- Head teacher in masters-level course in the Computer Science department.
- Focus on NLP using deep learning and classical methods.

AI lifecycle \| *Guest lecturer, University of Iceland* — Spring 2021

- Lecture on neural machine translation with a case study.

Introduction to Logic | *TA, University of Iceland*	Spring 2012
Mathematical Analysis | *TA, University of Iceland*	Autumn 2009

Talks

Looking Back on The Icelandic Language Technology Program \| *ASTIN '24* — November 2024

- Talk about the government-funded program and its wide reaching implications.

How correct is your VLM? \| *Visipedia Workshop '24* — April 2024

- Evaluation of vision-and-language models in the context of the iNaturalist dataset.

Language Models and Innovation \| *University of Iceland Innovation Award Ceremony* — May 2023

- Impact of artificial intelligence on innovation.

Representation Learning and Neural Network \| *Arion Bank* — March 2022

- Representation learning and AI, presented for one of the largest banks in Iceland.

IceBERT – language models for Icelandic \| *Icelandic Linguistics Society* — November 2021

- Language models and NLP for Icelandic.

Artificial Intelligence and Question Answering \| *Icelandic Computer Science Society* — November 2021

- Lecture on AI and QA based on MSc thesis.

Language and Artificial Intelligence \| *Reykjavík City library* — September 2021

- An informal conversation for the public with a journalist interviewing. General discussion about AI and language.

Machine Translation, an Important Option \| *Reykjavík University* — May 2021

- Machine translation for Icelandic and its applications. Part of a conference about language technology, Máltæknibyltingin (e. *The Language Technology Revolution*)

Publications

Sebastian Bugge Loeschcke, Mads Toftrup, Michael Kastoryano, Serge Belongie, **Vésteinn Snæbjarnarson**. *LoQT: Low Rank Adapters for Quantized Pre-training.* NeurIPS 2024 & WANT@ICML 2024 Oral. (Best paper award.)

Niklas Stoehr, Kevin Du, **Vésteinn Snæbjarnarson**, Robert West, Ryan Cotterell, Aaron Schein. *Activation Scaling for Attribution and Intervention in Language Models.* EMNLP 2024.

Evgenia Ilyinskaya, **Vésteinn Snæbjarnarson**, Hanne Krage Carlsen, and Björn Oddsson. *Small-scale geohazards cause significant and highly variable impacts on emotions.* 2024. Natural Hazards and Earth System Sciences (NHESS).

Kevin Du, **Vésteinn Snæbjarnarson**, Niklas Stoehr, Jennifer C. White, Aaron Schein, Ryan Cotterell. *Persuasiveness and Susceptibility in In-Context Learning.* Annual Meeting of the Association for Computational Linguistics (ACL) 2024.

Steinunn Rut Friðriksdóttir, Annika Simonsen, Atli Snær Ásmundsson, Guðrún Lilja Friðjónsdóttir, Anton Karl Ingason, **Vésteinn Snæbjarnarson** and Hafsteinn Einarsson. *Ice and Fire: Dataset on Sentiment, Emotions, Toxicity, Sarcasm, Hate speech, Sympathy and More in Icelandic Blog Comments*. TRAC 2024; LREC-COLING. Torino, Italy.

Nico Lang, **Vésteinn Snæbjarnarson**, Elijah Cole, Oisin Mac Aodha, Christian Igel, Serge Belongie. *From Coarse to Fine-Grained Open-Set Recognition*. Conference on Computer Vision and Pattern Recognition (CVPR) 2024. Seattle, USA.

Peter Ebert Christensen, **Vésteinn Snæbjarnarson**, Andrea Dittadi, Serge Belongie and Sagie Benaim. *Assessing Neural Network Robustness via Adversarial Pivotal Tuning*. Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV, oral) 2024. Hawaii, USA.

Idan Schwartz*, **Vésteinn Snæbjarnarson***, Sagie Benaim, Hila Chefer, Lior Wolf, Serge Belongie. 2023. *Discriminative Class Tokens for Text-to-Image Diffusion Models*. Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV) 2023. Paris, France.

Svanhvít Lilja Ingólfsdóttir, Petur Orri Ragnarsson, Haukur Páll Jónsson, Haukur Barri Simonarson, Vilhjalmur Thorsteinsson and **Vésteinn Snæbjarnarson**. *Byte-Level Grammatical Error Correction Using Synthetic and Curated Corpora*. Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL 2023, oral). Toronto, Canada.

Vésteinn Snæbjarnarson, Annika Simonsen, Goran Glavaš, Ivan Vulić. Transfer to a Low-Resource Language via Close Relatives: The Case Study on Faroese. The 24th Nordic Conference on Computational Linguistics, 2023. Tórshavn, Faroe Islands.

Vésteinn Snæbjarnarson and Hafsteinn Einarsson. 2022. Cross-Lingual QA as a Stepping Stone for Monolingual Open QA in Icelandic. In Proceedings of the Workshop on Multilingual Information Access (MIA) at NAACL 2022. Seattle, WA, USA.

Vésteinn Snæbjarnarson and Hafsteinn Einarsson. 2022. Natural Questions in Icelandic. In Proceedings of the 13th International Conference on Language Resources and Evaluation (LREC 2022). Marseille, France.

Vésteinn Snæbjarnarson*, Haukur Barri Símonarson*, Pétur Orri Ragnarsson, Svanhvít Lilja Ingólfsdóttir, Haukur Páll Jónsson, Vilhjálmur Þorsteinsson and Hafsteinn Einarsson. 2022. A Warm Start and a Clean Crawled Corpus – A Recipe for Good Language Models. In Proceedings of the 13th International Conference on Language Resources and Evaluation (LREC 2022). Marseille, France.

Anna Björk Nikulásdóttir, Þórunn Arnardóttir, Jón Guðnason, Þorsteinn Daði Gunnarsson, Anton Karl Ingason, Haukur Páll Jónsson, Hrafn Loftsson, Hulda Óladóttir, Einar Freyr Sigurðsson, Atli Þór Sigurgeirsson, **Vésteinn Snæbjarnarson** and Steinþór Steingrímsson. 2021. *Help Yourself from the Buffet: National Language Technology Infrastructure Initiative on CLARIN-IS*. In Proceedings of the CLARIN Annual Conference.

Haukur Barri Símonarson, **Vésteinn Snæbjarnarson**, Pétur Orri Ragnarsson, Haukur Páll Jónsson and Vilhjálmur Þorsteinsson. 2021. *Miðeind's WMT 2021 Submission*. In Proceedings of the Sixth Conference on Machine Translation (WMT21, EMNLP), Dominican Republic.

Haukur Páll Jónsson*, Haukur Barri Símonarson*, **Vésteinn Snæbjarnason***, Steinþór Steingrímsson* and Hrafn Loftsson. 2020. *Experimenting with Different Machine Translation Models in Medium-Resource Settings*. In Proceedings of the 23rd International Conference on Text, Speech and Dialogue (TSD 2020). Brno, Czech Republic (Online). Lecture Notes in Computer Science, vol 12284. Springer, Cham.

Vivian P. W. Miao, Sheeba S Manoharan-Basil, **Vésteinn Snæbjarnarson** and Ólafur Andrésson. 2012. *Expression of lec-1, a mycobiont gene encoding a galectin-like protein in the lichen Peltigera membranacea.* Symbiosis 57, 23-31.

Other

SwissAI Multimodal Project 2024
- Core member in multimodal horizontal within the SwissAI project.

TrustLLM - Horizon Europe 2023-2026
- Joint project with multiple European institutions to develop an open, trustworthy, Germanic LLM.
- Co-lead in work package on alignment, involved in other packages.

The University of Iceland Science and Innovation Motivational Award Summer 2021
- For MSc thesis. Awarded annually to a project affiliated with the University in some way.

Icelandic Student Innovation fund Spring 2020
- Grant for creating an Icelandic QA corpus - Natural Questions in Icelandic.
- Hired five students in the summer of 2020 to create the corpus.

Icelandic Student Innovation fund Summer 2010
- Developed methods for posthoc assembly of genomic data from different sequencing methods.

Participant at International Chemistry Olympiads | *Moscow and Budapest* Summer 2008 and 2009
- Competed on behalf of Iceland after qualifying in domestic competitions.

Academic Service

Reviewing: NeurIPS, ACL, COLING, Bioinformatics (Oxford University Press).
Chairing: Co-chair at *Machine Learning and Statistical Methods* session at LREC 2022.
Supervision: Christoffer Ringgaard - Fine Grained Visual Categorization of Sailboats, University of Copenhagen, 2023.
Thesis examiner: Automatic Abstractive Summarization for Icelandic Text, 60 ECTS, Þór Sverisson, University of Iceland, 2023.