

Patrick Huber

I am a third year Ph.D. student in Computer Science at the NLP Lab of the University of British Columbia (UBC). My research focuses on designing and implementing innovative computational models that enable automated systems to better understand natural language.

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EXPERIENCE

University of British Columbia (UBC), Vancouver, Canada *NLP Research Assistant*

Sep 2018 - PRESENT

Researching methods and applications of discourse parsing (using unsupervised/distantly supervised models), sentiment analysis and summarization with modern deep learning techniques.

Supervisor: Giuseppe Carenini

Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany *NLP Research Assistant*

May 2017 - Mar 2018

Explored context representations for Language Models and automated evaluations of contextual errors.

Supervisor: Alex Waibel & Jan Niehues

SAP SE, Walldorf, Germany *Software Developer*

Jan 2017 - Jun 2017

Developed web applications frequently used by over 1000 customers and implemented customer-driven development projects

SAP Labs, Vancouver, Canada *Software Developer*

May 2016 - Dec 2016

Full-stack web development with SAPUI5. Led a team of four international interns

EnBW, Karlsruhe, Germany *Software Developer*

Oct 2011 - Apr 2016

Implemented multiple applications for BlackBerry and Android. Developed a proof-of-concept real-time control center

AWARDS / SCHOLARSHIPS

NSERC PGS-D Scholarship

April 2020

Scholarship of \$63,000 over 3 years awarded to high-calibre scholars in the natural sciences and engineering

Four Year Doctoral Fellowship

April 2020

Scholarship of \$18,200 per year plus tuition for up to four years to support outstanding domestic and international doctoral students

British Columbia Graduate Scholarship (BCGS)

Sep 2019

Scholarship of \$15,000 awarded to exceptional students in a thesis-based graduate program

Graduation with distinction

Mar 2018

Top 10% of Graduating Class at the Karlsruhe Institute of Technology (KIT)

Industry Award

May 2017

FastTrack Award for Top Performing Interns at SAP

Industry Award

Apr 2015

Scholarship, Awarded with €250/Month, Netze BW GmbH

EDUCATION

University of British Columbia (UBC), Vancouver, Canada *Ph.D. Computer Science*

Sep 2018 - PRESENT

Area of Research: Machine Learning for NLP

Funding: NSERC Scholarship & Research Assistantship (Industry Grant)

Research Interests: Discourse Parsing, Sentiment analysis, Summarization

GPA: 91%

Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany *M. Sc. Computer Science*

Oct 2014 - Mar 2018

Majors: Machine Learning, Software Engineering

Thesis: Hierarchical Approach to Context-Aware Modeling

GPA: A+

Cooperative State University, Karlsruhe, Germany *B. Eng. Computer Science*

Oct 2011 - Sep 2014

Majors: Software Engineering, Electrical Engineering

Thesis: Indoor Object Tracking with active RFID

GPA: A+

PROGRAM COMMITTEE MEMBER / REVIEWER

EMNLP 2019 (Main Conference)	Reviewer in the area of "Summarization and Generation"
EMNLP 2019 (Workshop)	Reviewer for the 2nd workshop on "New Frontiers in Summarization"
AAAI 2020 (Main Conference)	Program Committee (PC) member
COLING 2020 (Main Conference)	Reviewer in the area of "Sentiment Analysis"
AAACL 2020 (Main Conference)	Member of the reviewing committee
AAAI 2021 (Main Conference)	Program Committee (PC) member
EACL 2021 (Main Conference)	Reviewer in the area of "Generation and Summarization"

Graduation with distinction

Sep 2014

Top 5% of Graduating Class at the Cooperative State University

INVITED TALKS

Microsoft Research Asia (MSRA)

Beijing, Nov 11, 2019

Huawei Research

Shenzhen, Nov 8, 2019

LANGUAGES

German (First Language),
English (Professional Level),
French (Beginner Level)

SKILLS

Python (10/10)
Java (9/10)
JavaScript (8/10)
PyTorch (10/10)
Tensorflow (6/10)
Keras (7/10)
D3 (8/10)
{SQL | NoSQL} DB (8/10)
Unix (9/10)

FURTHER RESEARCH EXPOSURE

Keynote at Canadian AI 2020
Online, May 12, 2020
EMNLP 2019 paper, presented by my co-author Giuseppe Carenini

PUBLICATIONS

Grigorii Guz, Patrick Huber and Giuseppe Carenini. 2020:
Unleashing the Power of Neural Discourse Parsers - A Context and Structure Aware Approach Using Large Scale Pretraining
In Proceedings of the 28 International Conference on Computational Linguistics (COLING). 10 pages.

Patrick Huber and Giuseppe Carenini. 2020:
From Sentiment Annotations to Sentiment Prediction through Discourse Augmentation
In Proceedings of the 28 International Conference on Computational Linguistics (COLING). 10 pages.

Patrick Huber and Giuseppe Carenini. 2020:
MEGA RST Discourse Treebanks with Structure and Nuclearity from Scalable Distant Sentiment Supervision
In Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP). 9 pages.

Wen Xiao, Patrick Huber and Giuseppe Carenini. 2020:
Do We Really Need That Many Parameters In Transformer For Extractive Summarization? Discourse Can Help!
In Proceedings of the 1st Workshop on Computational Approaches to Discourse (CODI). 9 pages.

Patrick Huber and Giuseppe Carenini. 2020:
Unsupervised Inference of Data-Driven Discourse Structures using a Tree Auto-Encoder
Extended Abstract (non-archival) in the 1st Workshop on Computational Approaches to Discourse (CODI). 3 pages.

Patrick Huber and Giuseppe Carenini. 2020:
Large Discourse Treebanks from Scalable Distant Supervision
Extended Abstract (non-archival) in the 1st Workshop on Computational Approaches to Discourse (CODI). 3 pages.

Patrick Huber and Giuseppe Carenini. 2019:
Predicting Discourse Structure using Distant Supervision from Sentiment
In Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing (EMNLP). 9 pages.

Patrick Huber, Jan Niehues and Alex Waibel. 2018:
Automated Evaluation of Out-of-Context Errors
In Proceedings of the 11th edition of the Language Resources and Evaluation Conference (LREC). 5 pages.