

# Jessica Maria Echterhoff

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## Education

<b>Doctor of Philosophy in Computer Science</b>	UNIVERSITY OF CALIFORNIA, SAN DIEGO, USA	04/22–ongoing
Research on human and data centric machine learning; GPA: 3.6/4.0; Expected graduation in January 2025		
<b>Master of Science in Machine Learning</b>	UNIVERSITY OF CALIFORNIA, SAN DIEGO, USA	09/19–03/22
Specialization in applied machine learning; Research in human centered computing; GPA: 3.44/4.0		
<b>Exchange Semester Information Technology</b>	ÉCOLE DE TECHNOLOGIE SUPÉRIEURE MONTRÉAL, CANADA	09/18–12/18
Specialization in machine learning and software engineering in a French speaking program; GPA: 3.73/4.3		
<b>Bachelor of Science in Informatics</b>	TECHNICAL UNIVERSITY MUNICH, GERMANY	04/16–03/19
Minor in business administration; Thesis: "Gait and Jump Classification in Equestrian Sports" (grade 1.0); GPA: 2.2 (1.0 best–4.0 worst)		
<b>Bachelor of Science in Management and Technology</b>	TECHNICAL UNIVERSITY MUNICH, GERMANY	10/13–09/16
Minor in informatics and finance; Thesis: "CSR Reporting and Capital Market Reactions" (grade 2.0); GPA: 2.5 (1.0 best–4.0 worst)		
<b>Exchange Semester Intensive Chinese Language Course</b>	ZHEJIANG UNIVERSITY HANGZHOU, CHINA	09/15–12/15
Studies of Chinese culture and language in an intensive intercultural program		
<b>Abitur</b>	GYMNASIUM DER STADT VERL, GERMANY	06/10–08/13
Majored in English and French; GPA: 1.4 (1.0 best–4.0 worst); Best transfer student of 2013		

## Experience

<b>Machine Learning Research Scientist Intern</b>	APPLE INC., CUPERTINO, USA	01/24–06/24
Developed a model update strategy minimizing regression in LLMs by 40%		
<b>Machine Learning and Data Science Intern</b>	MICROSOFT INC., REDMOND, USA	06/23–09/23
Delevoped a data-centric decision-making tool to evaluate hypothetical scenarios and reduce manual data analysis		
<b>Machine Learning Research Intern</b>	APPLE INC., CUPERTINO, USA	06/22–09/22
Provided a model-in-the-data-annotation-loop to automate an annotation task leading to up to 100% reduction of annotation volume		
<b>Machine Learning Research Intern</b>	APPLE INC., HEIDELBERG, GERMANY	07/21–12/21
Provided proof of concept of a model-in-the-loop data annotation approach leading to 30% cost reduction		
<b>Software Developer</b>	SIDEKICK INTERACTIVE INC., MONTRÉAL, CANADA	02/19–08/19
Built, maintained and tested 8 native iOS and 5 native Android applications for 5 different customers		
<b>Mobile Applications Developer</b>	FREELANCER, CHILE	12/18–01/19
Leading iOS developer for implementation, maintenance and testing of an iOS application for a German learning-transfer startup		
<b>Software Engineer</b>	EVERSKILL GMBH MUNICH, GERMANY	06/17–08/18
Developed, maintained and tested functional and technical components of an iOS learning-transfer application		
<b>Advising Developer</b>	BARKAWI MANAGEMENT CONSULTANTS GMBH & Co. KG MUNICH, GERMANY	05/16–01/17
Coordinated the implementation of the user interface redesign for an American agricultural machinery manufacturer by leading the front-end development and customer validation process		
<b>iOS Developer</b>	ROCHE DIABETES CARE MUNICH, GERMANY	03/16–07/16
Built a diabetes management system in cooperation with TU Munich by leading the user interface implementation in a student team		
<b>Web Developer</b>	LENDICO DEUTSCHLAND GMBH BERLIN, GERMANY	03/15–07/15
Built a search engine optimized landing page by leading a 3-people student development team		

## Projects and Prizes

<b>Internship work was presented as a poster</b>	APPLE DATA SCIENCE SUMMIT AND APPLE MACHINE LEARNING SUMMIT	12/21    2/22
<b>Summited Europe's Highest Mountain (15,774 ft/4,808 m)</b>	MONT BLANC, FRANCE	08/21
<b>Finisher Int. Bad Pyrmont Marathon (1st in age group, 21/146 overall)</b>	BAD PYRMONT, GERMANY	07/20
<b>Graduate Student Service Award</b>	UNIVERSITY OF CALIFORNIA, SAN DIEGO, USA	06/20
Awarded for outstanding support and service by helping prospective students connect to potential advisors		
<b>Winning Team TechFest Hackathon and Osram/Adidas Challenge</b>	MUNICH, GERMANY	09/16
Won 1st place with two colleagues by developing a smart cycling jacket to prevent accidents in traffic (297 participants)		
<b>3rd Place Startup Weekend</b>	HANGZHOU, CHINA	11/15
Won 3rd place with two colleagues by developing an iOS application to connect athletes in China (50 participants)		

## Scholarships and Fellowships

<b>Apple Scholars in AI/ML Fellowship</b>		2023–2025
Selected to receive a research fellowship based on academic and research excellence		
<b>Women in Machine Learning Scholarship to attend ICLR</b>	VIRTUAL CONFERENCE	05/21
<b>Graduate Women in Computing Scholarship to attend Grace Hopper Celebration</b>	VIRTUAL CONFERENCE	09/20
<b>Electrical and Computer Engineering Fellowship</b>	UNIVERSITY OF CALIFORNIA, SAN DIEGO, USA	09/19–06/20
Selected to receive a research fellowship based on academic fit to the department's research endeavors (56,000US\$)		
<b>Scholarship to Attend Research Conferences</b>	ACM-W	10/18
Selected by ACM to be funded to present my paper at Ubicomp/ISWC 2018		

Selected to attend a fully funded summer school for social signal processing, displays and interaction with smart environments

Selected as part of a high-potential team to attend a fully funded exchange program to expand business ideas in China

Selected as one of the best German-speaking high-potential candidates based on school GPA

## Service

**Reviewer** ACM WebConf ('21,'23); UbiComp/ISWC CONFERENCE ('20); IEEE JBHI ('19)

**Mentor** UCSD GRAD WOMEN IN COMPUTING ('21); UCSD ECE GRADPAL ('21,'22)

**Volunteer** UbiComp/ISWC ('20); ICML ('20); ACI CONFERENCE ('18); WEB SUMMIT ('17)

## Skills

### Programming Languages/Frameworks

PYTHON ● ● ●  
PyTORCH ● ● ●  
SWIFT ● ● ○  
HTML/CSS ● ● ○

JAVASCRIPT ● ● ○  
JAVA ● ○ ○  
KOTLIN ● ○ ○  
TENSORFLOW ● ○ ○

OCAML ● ○ ○  
OBJECTIVE-C ● ○ ○  
C++ ● ○ ○  
C ● ○ ○

### Spoken Languages

GERMAN ● ● ●  
ENGLISH ● ● ●  
FRENCH ● ● ○  
MANDARIN ● ○ ○

LATIN ● ○ ○  
SPANISH ● ○ ○

## Teaching

**Neural Networks/Pattern Recognition; Recommender Systems; Big Data Analysis** UC SAN DIEGO

2022

**Object-Oriented Programming; Rapid Software and Hardware Design** UC SAN DIEGO

2021

**Advanced Topics in Software Engineering** UC SAN DIEGO

2020

## Publications

- 06/2024 Jessica Maria Echterhoff, Fartash Faghri, Raviteja Vemulapalli, Ting-Yao Hu, Chun-Liang Li, Oncel Tuzel, Hadi Pouransari; "MUSCLE: A Model Update Strategy for Compatible LLM Evolution", Under Submission
- 06/2024 Haozhe Xu, Zhankui He, Jessica Maria Echterhoff, Xiaoqing Zheng, Julian McAuley; "Are Automatic Evaluations Consistent with User Studies? A Meta-Evaluation for Conversational Recommendation", Under Submission
- 06/2024 Jessica Maria Echterhoff, Yao Liu, Abeer Alessa, Julian McAuley and Zexue He; "Cognitive Bias in High Stakes Decision-Making with LLMs", Under Submission
- 06/2024 Jessica De Souza, Varun Viswanath, Jessica Maria Echterhoff, Kristina Chamberlain, Edward Jay Wang; "Augmenting Tele-Postpartum Care With Vision-Based Detection of Breastfeeding-Related Conditions: Algorithm Development and Validation", Accepted to the Journal of Medical Internet Research
- 03/2024 Junda Wu, Jessica Maria Echterhoff, An Yan, Kyungtae Han, Amr Abdelraouf, Rohit Gupta, Julian McAuley; "PDB-Eval: An Evaluation of Large Multimodal Models for Description and Explanation of Personalized Driving Behavior", Under Submission
- 01/2024 Jessica Maria Echterhoff, Aditya Melkote, Sujen Kancherla and Julian McAuley; "Avoiding Decision Fatigue in Recommendation with AI-Assisted Decision-Making", Accepted to the 2024 ACM Conference on User Modeling, Adaptation and Personalization (UMAP)
- 01/2024 Se-eun Yoon, Zhankui He, Jessica Maria Echterhoff, and Julian McAuley; "Evaluating Large Language Models as Generative User Simulators for Conversational Recommendation", Accepted to the 2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)
- 01/2024 Jessica Maria Echterhoff, An Yan, Kyungtae Han, Rohit Gupta, Amr Abdelraouf and Julian McAuley; "Driving through the Concept Gridlock: Unraveling Explainability Bottlenecks in Automated Driving", 2024 Winter Conference on Applications in Computer Vision
- 09/2023 Jessica Maria Echterhoff, Bhaskar Sen, Yifei Ren, Nikhil Gopal; "Should you make your decisions on a WhIM? Data-Driven Decision making using a What-If Machine for Evaluation of Hypothetical Scenarios", arXiv:2309.17364
- 06/2023 Jessica Maria Echterhoff and Julian McAuley; "Comparing Comparisons: Generating Aspect-Aware Comparative Sentences", arXiv Preprint, arXiv:2307.03691
- 03/2022 Jessica Maria Echterhoff, Matin Yarmand, and Julian McAuley; "AI-Moderated Decision Making: Capturing and Balancing Anchoring Bias in Sequential Decision Tasks", Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems

- 11/2021      Yinan Xuan, Varun Viswanath, Sunny Chu, Owen Bartolf, **Jessica Maria Echterhoff** and Edward J. Wang;  
**"SpecTracle: Wearable Facial Motion Tracking from Unobstructing Peripheral Cameras"**, arXiv  
 Preprint, arXiv:2308.07502
- 08/2020      **Jessica Maria Echterhoff** and Edward J. Wang; **"PAR: Personal Activity Radius Camera View for  
 Contextual Sensing"**, arXiv Preprint, arXiv:2008.07204
- 12/2018      **Jessica Maria Echterhoff**, Juan Haladjian and Bernd Brügge; **"Gait Analysis in Horse Sports"**, Proceedings  
 of the Fifth ACM International Conference on Animal-Computer Interaction 2018
- 10/2018      **Jessica Maria Echterhoff**, Juan Haladjian and Bernd Brügge; **"Gait and Jump Classification in Modern  
 Equestrian Sports"**, Proceedings of the 2018 ACM International Symposium on Wearable Computers