SHRIYA BHATIJA

M.Sc. Mathematics Student at TU Munich | Interested in Statistical Machine Learning



Contact ·

- 🛊 Born on 4th of January 1999
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– About me —

I am a driven and motivated M.Sc. Mathematics student at TU Munich, specialising in Numerics, Stochastics, and Machine Learning. My studies have strengthened my ability to approach complex problems with analytical depth, while my technical experiences have provided me with domain-specific expertise. I work well in independent as well as collaborative work environments, and enjoy developing creative solutions to challenging tasks. I have recently completed my Master's thesis at the University of Cambridge, where I worked within Causal Machine Learning.

- Availability -

Available for either a full-time corporate role or an internship, starting in March 2025.

ACADEMICS

M.Sc. Mathematics

Graduate degree at the Technical University of Munich with an exchange semester at KTH in Stockholm and at the University of Cambridge.

10/2021present

Technical University of Munich

• Munich, Germany

- Current grade: 1.5 (Distinction)
- Studies are focused on Stochastic Modelling and Numerical Mathematics
- Minor in Computer Science; specifically interested in Machine Learning

04/2024-12/2024

The University of Cambridge

♀ Cambridge, UK

- Final grade: 1.0 (Distinction)
- Master's thesis in the field of Causal Machine Learning
- Submitted our work to an ML conference, already available as a preprint
- Supervisors: Prof. Dr. Matthias Althoff and Dr. Thomas Bohné

08/2022-01/2023

KTH Royal Institute of Technology

♀ Stockholm, Sweden

• Final grade: 1.5 (Distinction)

• Completed (project) courses worth 30 ECTS on various data science topics

B.Sc. Mathematics

Undergraduate degree at the University of Bonn, internationally known for its excellence in Mathematics.

10/2017-08/2021

University of Bonn

♀ Bonn, Germany

• Final grade: 2.3 (Good)

- Studies focused on Stochastics, Algebra and Representation Theory
- Minor in Economics; specialised in Microeconomics

09/2019-01/2020

Universidad de Alicante

Alicante, Spain

• Semester abroad

• Completed courses related to Economics and pure Mathematics

Secondary Education

German high school degree with a special focus on musical education.

08/2015-07/2017

Stadtgymnasium Cologne Porz

♀ Cologne, Germany

- Final grade: 1.3 (Distinction)
- Majored in Biology and Mathematics
- Intensive Music's program: weekly piano lessons, ensembles and concerts

(a) TECHNICAL EXPERIENCE

Institute of Industrial Science

♥ Tokyo, Japan

Student internship in the field of natural language processing at the Institute of Industrial Science, one of the largest university-attached research centers in Japan.

10/2023-03/2024

Engineering Intern: NLP

- Explored a new language task for indirect language understanding called *Inferring the underlying intent of indirect answers*
- Built a tool to efficiently extract, preprocess and annotate (polar question, indirect answer) pairs from X, formerly Twitter, data repositories
- Designed and implemented language models for our indirect language understanding task using pre-trained models such as BERT

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- Area of interest ----

Approaching complex real-world challenges with machine learning by carefully leveraging data-driven insights

– Coding expertise —

Python - Strong proficiency in machine learning frameworks such as TensorFlow and PyTorch

C/C++ - Elementary (but growing) proficiency

github.com/ShriyaBhatija

——— Languages —

German - Mother tongue

Hindi - Mother tongue

English - Professional proficiency

Spanish - Intermediate proficiency

– Personal Interests —

- ► *Piano* I have been playing the piano since my childhood and I still enjoy it as a creative outlet.
- **Running** Recently, I have been enjoying running and just completed my first long-distance race.
- ☞ Travelling But above all, I love experiencing new cultures and traditions. Currently, I am exploring Munich through a 35mm lens.

Munich, March 3rd 2025

German Aerospace Center (DLR)

9 Berlin, Germany

Student internship in the field of computer vision at Germany's national center for aeronautics and space research.

02/2023-06/2023

Engineering Intern: Computer Vision

- Explored attention-based neural networks for computer vision tasks (vision transformers such as the pre-trained Segmenter and SegViT) in a maritime context, specifically for semantic segmentation of ships on DLR-MACS data
- Experimented with extensive data fusion, transfer learning and fine-tuning approaches to improve model output and mIoU scores
- Established and implemented a framework of several benchmarks to evaluate the reliability and trustworthiness of these models as compared to traditional convolution-based architectures

Y INITIATIVES

180 Degrees Consulting Munich

♀ Munich, Germany

Voluntary membership at the world's largest student consultancy for non-profits and social enterprises.

05/2022-09/2022

Student Consultant

Project task: constructing a verification framework to evaluate the credibility of brands' sustainability claims, enabling distinction between greenwashing and green marketing

AIESEC - Deutsches Komitee der AIESEC e.V.

♀ Bonn, Germany

 $Voluntary\ Membership\ at\ the\ largest\ international\ youth-run\ organization.$

08/2020-01/2021

National Consultant

- Member of the National Support Body of AIESEC in Germany
- Consulted six local committees on finance and management related topics

02/2020-07/2020

Local Committee Vice President

- Member of the local committee's executive board
- Led the local committee's finance team that consisted of five members

REFERENCES

Paul-David Zuercher, MSc, PhD (candidate). Doctoral student at the Department of Engineering, University of Cambridge.

Mr. Zuercher supervised my Master's thesis and his active mentorship guided me throughout my research. Contact him here: pdz20@cam.ac.uk

Prof. Dr. Peter Jung. Researcher at TU Berlin and head of the SensorAI group at the OS-EDP department of the DLR.

Professor Jung co-supervised me at the DLR and on many occasions his vast expertise inspired new directions for my work. Contact him here: Peter.Jung@dlr.de

More professional and academic references as well as certificates are available upon request.