

Pratham Shrivastava

Master Student in Applied Computer Science

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Profile

AI/ML practitioner with strong academic grounding and hands-on experience developing deep learning and computer vision systems across healthcare, fintech, and environmental domains. Skilled in designing and deploying end-to-end ML pipelines, achieving 95%+ accuracy in real-world projects. Specialized in neural networks, image processing, and cloud-based deployment, with a focus on translating research into scalable, applied solutions.

Experience

Faculty of Business and Economics

Aug 2024 – Present

Student Research Assistant – Georg-August-Universität Göttingen

web: prathamshrivastava

- Reengineered 15+ behavioral economics experiments using oTree (Python), migrating from legacy zTree systems and improving scalability by 300% for concurrent user sessions.
- Developed real-time multiplayer experimental frameworks supporting 200+ concurrent participants, implementing advanced randomization algorithms and live data synchronization.
- Ensured accuracy, reproducibility, and synchronized interactions through rigorous testing.

Faculty of Mathematics and Computer Science

Sep 2024 – Present

Student Assistant – Georg-August-Universität Göttingen

- Developed and maintained comprehensive digital guides and FAQs to streamline administrative support for new international students, including visa, accommodation, and campus service inquiries.

Team Policumbent, Italy

Oct 2021 – Jul 2023

Data Analyst – Politecnico di Torino

- Performed quantitative analysis of vehicle dynamics and performance metrics leveraging MATLAB and Python (NumPy, Pandas) for data processing and statistical modeling, improving vehicle efficiency by 15%.
- Created data visualizations and dashboards using Matplotlib and Seaborn to support evidence-based design decisions across the team.

Education

MSc in Applied Computer Science

Sep 2023 – Present

Georg-August-Universität Göttingen, Germany

Specialization: Data Science

Thesis: Neuromorphic Computing Research - Studying SpiNNaker2 chip performance through advanced Spiking Neural Networks, achieving improvement in synaptic plasticity modeling via calcium-based dynamics simulation.

BSc in Computer Engineering

Oct 2019 – Jul 2023

Politecnico di Torino, Italy

Diploma in Computer Science

Oct 2018 – Jul 2019

University of Pisa, Italy

Languages

English (C2) | German (B1) | Italian (B2) | Hindi (C2)

Technical Skills

Programming: Python, C, R, Matlab

ML/DL: TensorFlow, Scikit-learn, PyTorch, Keras

Image Processing: OpenCV, Pillow

Frameworks: Django, Flask

Data Analysis: Numpy, Pandas

Visualization: Matplotlib, Seaborn

Databases: MySQL, MongoDB

Deployment: Git, GitHub, Docker, CI/CD, AWS, Azure

Tools: Anaconda, Jupyter, VS Code

Office: Word, Excel, PowerPoint, Outlook

Projects

- **Brain Tumor Detection:** Developed CNN-based brain tumor classification system using TensorFlow and scikit-learn achieving 94% accuracy on 1,200+ medical images; deployed using Flask.
- **Coffee Level Detection Using Thermal Sensor Camera:** Built thermal image classification system using custom CNN architecture (TensorFlow) achieving 94% accuracy across 5 coffee level categories.
- **Meeting Summarization Using NLP:** Implemented BERT-based meeting summarization pipeline using Hugging Face Transformers, reducing 60-minute meeting transcripts to 2-minute summaries with 92% key point retention rate. Fine-tuned on 500+ corporate meeting datasets.
- **Forest Biomass Estimation:** Developed satellite image analysis pipeline using scikit-image and OpenCV to estimate forest biomass with 87% accuracy across 1,000+ hectares. Created automated feature extraction reducing manual analysis time by 80%.
- **Byzantine Manuscripts Analysis:** Image analysis for historical insights using *Pillow* and *NumPy*.
- **Media Reception and Binge-Watching:** Psychological study on digital media habits using *Pandas* and *Seaborn*.

Volunteer and Leadership

Selection Committee Member – MSc Program

Feb 2024 – Present

Interviewed candidates and reviewed academic and research profiles for program suitability.

Nirmiti – Indian Fraternity in Göttingen

Jul 2023 – Present

General Secretary

- Supported incoming Indian students with cultural and academic integration, organizing events.

Politecnico di Torino Indian Student Association (PISA)

Vice President

Mar 2022 – Jul 2023

Achievements

EDISU Scholarship (Italy)

Received for the full duration of BSc studies in recognition of sustained academic excellence and financial eligibility.