

PURU VAISH

Universiteit Twente

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EXPERIENCE

Data Analyst

ESports Team Twente

📅 June 2022 -

📍 Enschede

- Worked on data generated from games to produce meaningful strategies for improvements in game performance.
- Languages Used: Python, R
- Skills Used: Data Analysis, Data Cleaning, Statistical Models and Theory, Reporting and Decision Making.

Teaching Assistant - Explainable AI

Universiteit Twente

📅 June 2022 -

📍 Enschede

- Preparing Materials for the Lectures and Assignments
- Working with the Supervising Professor on feedback and improvements on the lecture content and

Student Assistant in Computer Science and Applied Mathematics

Universiteit Twente

📅 September 2020 -

📍 Enschede

- Chosen based on academic performance of the student in the same modules.
- Organising Study/Project Manuals, Supervising Labs, Grading Exams.
- Holding and Providing feedback on Agile and Scrum Sessions.

PROJECTS

On Multi-Stage Job Processing with Asymmetric Transition Costs between Operations

Bachelor Research Project

📅 March 2022 – July 2022

- Studied a common problem in manufacturing industries through the lenses of algorithms and mathematical modelling.
- Key Words: Algorithmics, Cost Optimisation, Mathematical Modeling, Time Complexity Analysis, Approximation Algorithms, Exact Methods, Travelling Salesperson Problem

Network Based Analysis of Financial Markets

Exploratory Project

📅 July 2022 – August 2022

- Used advanced mathematics to formulate and study network like features in Financial Markets to detect and study times of crisis.
- Key Words: Threshold Networks, Time Series Evolution.
- Language and Packages Used: python, networkx, scipy, numpy, pandas

EDUCATION

Masters in Science in Applied Mathematics

Universiteit Twente

📅 July 2024

Bachelors in Science with Double Majors in Applied Mathematics and Technical Computer Science

Universiteit Twente

📅 July 2022

8.9

Honours in Mathematics

Universiteit Twente

Cambridge CIE A-Level

Physics, Chemistry, Mathematics, Computer Science

📅 Summer 2019

A*

Cambridge CIE AS-Level

English Language

📅 Summer 2018

A

Cambridge CIE IGCSE

Physics, Chemistry, General Mathematics, Additional Mathematics, ICT, English as First Language, Economics

📅 Summer 2017

A*

TECHNICAL SKILLS

LaTeX python R matlab
PostgreSQL Java JavaScript unix
spreadsheet Machine Learning
Algorithmics Data Cleaning
Data Analysis numpy networkx
scipy pandas matplotlib
MatLab Simulink git pyTorch
Tensorflow scikit-learn HTML
CSS svelte tailwindJS

NON-TECHNICAL SKILLS

Agile/Scrum research skills
Native proficiency in English
Public Speaking Team Working

Model Agnostic Adversarial Defence Techniques

Exploratory Project

📅 December 2021 – January 2022

- Research using state-of-the-art Deep Learning Models and Data Augmentation Techniques.
- Skills Used: python, numpy, matplotlib, pytorch (GPU)
- Further Exploratory Research done in Adversarial Learning to Prevent Catastrophic Learning.

ACHIEVEMENTS

- Recipient of University of Twente Scholarship along with additional partial Tuition Fee Waiver, an offer only made to limited students requiring additionally recommendation from professors and faculty.
- Recipient of KHMW Young Talent Incentive Award Informatics 2020 for achieving the highest results in the first year at a Dutch University given by KNVI and KIVI.
- 6th position finish with team in Interuniversitaire Mathematische Olympiade (LIMO), a dutch inter-university mathematical Olympiad.
- School Prefect, Honour Role
- Country Highest Overall Results in CIE A Levels
- Duke of Edinburgh Bronze Certificate
- Habitat for Humanity Volunteer

INTERESTS

1. Learning new things: be it programming techniques, new mathematics or a new recipe.
2. Programming: it is my hobby to optimise my code and follow coding conventions.
3. Following Developments of Applied Mathematics in Machine Learning: during my studies I worked with professors in the domain of machine learning, and being a mathematical oriented student I enjoy following these developments.
4. Reading Technical Articles: I follow magazines like Quanta which make technical topics easy to read for laymen. I wish to make science approachable similarly.
5. Swimming.

VOLUNTEERING

Building Homes for the Underprivileged

Habitat for Humanity Volunteer

📅 Summer 2018

📍 Gazipur, Bangladesh

Bookmark It! 2017

Fund Raiser at School

📅 Summer 2017

📍 Dhaka, Bangladesh

COURSEWORK

(This is only to give a brief overview of the courses attended)

- Linear Algebra I and II.
- Calculus I, II and III.
- Analysis I and II.
- Signals and Transforms
- Probability Theory and Mathematical Statistics
- Programming Theory and Project
- Network Systems
- Databases and Semi-Structured Data
- Human Computer Interaction and Requirements Engineering
- Statistical Machine Learning
- Complex Networks, random graph models
- Natural Language Processing and Computer Vision
- Machine Learning and Intelligent Interactions
- Computer Systems, Computer Architecture and Operating Systems
- Systems Theory and ODE
- Discrete Mathematics
- Languages and Machines
- Algebra
- Stochastic Models and Markov Chain and Queuing Theory
- Deep Learning from Theory to Practice
- Linear Algebra and Coding Theory
- Computational Complexity
- Modern Geometry (Algebraic Geometry)
- Signals with Information (including Entropy and Quantum Information)
- Optimal Transport and Applications to Machine Learning
- Bachelor Assignment, Research Project