

Sujit Debnath

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Education

M.Sc. in Artificial Intelligence ; CGPA: 1.8 (DE) <i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i> – Erlangen, DE	2021 – 2025
B.Sc. in Computer Science & Engineering ; CGPA: 1.3 (DE) <i>North South University</i> – Dhaka, BD	2015 – 2018
Higher Secondary Certificate (Science); GPA: 1.0 (DE) <i>Dhaka College</i> – Dhaka, BD	2011 – 2013
Secondary School Certificate (Science); GPA: 1.0 (DE) <i>Rampura Ekramunnesa Boys' High School</i> – Dhaka, BD	2009 – 2011

Experience

Data Quality Manager (Working Student) <i>CheckMyBus GmbH</i> – Nürnberg, DE	Oct 2024 – Present
<ul style="list-style-type: none">• Ensure high data integrity via regular quality checks & CMS integration from different mobility partners.• Support Business Operations team with data quality & administrative tasks to ensure smooth workflows.• Monitor and analyze KPIs of various mobility partners to optimize service offerings across markets.• Collaborate with international teams to maintain accurate, up-to-date global intercity connection data.	
Data Analyst (Working Student) <i>BMW Group</i> – Munich, DE	Jul 2023 – Sep 2024
<ul style="list-style-type: none">• Contributed to Conformity of Production (CoP) digitization project by enhancing analytics workflows.• Collaborated with CoP team to develop data dashboards using Oracle APEX & SQL for real-time insights.• Aligned with stakeholders to fulfil specific data analytics needs, enabling data-driven decision-making.• Utilized MS Excel, Oracle DB & Python to automate data pipeline, optimizing data analysis processes.	
Software Engineer - Automation (Working Student) <i>Elektrobit Automotive GmbH</i> – Erlangen, DE	Jul 2022 – Apr 2023
<ul style="list-style-type: none">• Engaged in a significant project involving emergency update automation for Volkswagen's EV.• Investigated automation options, and implemented Python & Bash scripts for flashing automotive ECUs.• Utilized GitHub for version control, managed project workflows & documentation with Jira, Confluence.	
Project Coordinator <i>Robi Axiata Limited</i> – Dhaka, BD	Feb 2020 – Jan 2022
<ul style="list-style-type: none">• Created performance reports, including pre-post KPI analysis, worse cell identification and tracking.• Developed & optimized SQL queries to efficiently extract and analyze performance data from Oracle DB.• Designed and implemented the <i>MS Kaizala</i> Message Alert system using Python, SQL, and REST APIs.	
Lab Officer <i>North South University</i> – Dhaka, BD	Jan 2019 – Dec 2019
<ul style="list-style-type: none">• Conducted interactive lab sessions, and developed comprehensive laboratory materials & curriculum.	
Under-Graduate Assistant <i>North South University</i> – Dhaka, BD	Jan 2019 – Apr 2019
<ul style="list-style-type: none">• Conducted tutorial sessions for students and assisted faculty members in course-related tasks.	


Publications

- **Bangla Short Speech Commands Recognition Using Convolutional Neural Networks**, *International Conference on Bangla Speech & Language Processing (ICBSLP)*, doi: 10.1109/ICBSLP.2018.8554395.
- **Early Detection of Glaucoma Using Fuzzy Logic in Bangladesh Context**, *2018 International Conference on Intelligent Systems (IS)*, doi: 10.1109/IS.2018.8710490.

Projects

Out-of-Distribution (OOD) Detection on Historical-WI Dataset Oct 2024 – Present

Leading a 5-member research team conducting comprehensive evaluation of multiple OOD detection approaches (e.g., ODIN, MSP, ViM, DICE, GradNorm) using the *ScriptNet Historical-WI dataset*.

Tech Used: Python, PyTorch, Scikit-learn, Bash  github.com/sujitdebnath/fau-projcv-ood-detection-wi

Large-scale Differential Gene Expression Analysis in scRNA-seq Data Oct 2023 – May 2024

Conducted comprehensive scRNA-seq analysis for type 2 Diabetes and MPN disease in case-control studies, involving data retrieval, clustering, cell annotation, DEGs identification, and a web app for visualization.

Tech Used: Python, Scanpy, Omicverse, Streamlit  github.com/sujitdebnath/fau-bionets-project-ws23

Advanced Computer Vision: A Five-Project Compilation Oct 2023 – Mar 2024

Worked on an advanced Computer Vision project comprising five sub-projects, including RANSAC-based image processing, historical writer identification, and basic face recognition systems.

Tech Used: Python, OpenCV, Scikit-learn, Bash  github.com/sujitdebnath/fau-cv-project-ws23

Impact of Weather and Climate on Bicycle Traffic in Köln Apr 2023 – Jul 2023

Developed a data engineering and data science project to analyze weather vs. bicycle traffic relationships in Köln, involving ETL pipeline creation, system/component testing, and CI pipeline implementation.

Tech Used: Python, Bash, SQLite, GitHub Actions  github.com/sujitdebnath/fau-data-engineering-ss23

Skills

Programming Languages	Python, Java, C++, JavaScript, SQL, Bash
ML Frameworks & Libraries	NumPy, Pandas, Scikit-learn, PyTorch, OpenCV
Databases	Oracle DB, MySQL, MongoDB
Dev Tools & Environments	Git & GitHub, CI/CD (GitHub Actions), Docker, Linux
Productivity Tools	MS Office, \LaTeX
Visualization Tools	Oracle Apex, Microsoft Power BI
Project Management	Jira, Confluence

Achievements

- **BSc Academic Distinction:** Graduated with *magna cum laude* distinction for getting 90% marks at NSU.
- **NSU Board of Trustee Scholarship:** Awarded 25% tuition waiver for academic excellence in BSc.
- **Golden A+:** Achieved the highest GPA of 5.00/5.00 across all nine subjects in SSC exam.

Extracurricular Activities

Member , <i>NSU Problem Solvers (NSUPS)</i> – Dhaka, BD	2015 – 2016
Volunteer , <i>JAAGO Foundation</i> – Dhaka, BD	2014 – 2015
Community Volunteer , <i>Volunteer for Bangladesh (VBD)</i> – Dhaka, BD	2014 – 2015

Languages & Hobbies

Languages	English (Proficient), Deutsch (A1), and Bengali (Native)
Hobbies	Reading Books (goodreads.com/sujitdebnath), Cycling, and Cooking