

# TUHIN MALLICK

Motivated graduate with a double master's degree in computational sciences and several years of hands-on experience in software engineering, project management and artificial intelligence.



## PERSON

**Name** Tuhin Mallick

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**LinkedIn**

[linkedin.com/in/tuhinmallick/](https://linkedin.com/in/tuhinmallick/)

**GitHub**

[github.com/tuhinmallick/](https://github.com/tuhinmallick/)

**Nationality** Indian

**Date of birth** 11. February 1996

## LANGUAGE

**Bengali** Mother-tongue

**English** Fluent (C1)

**German** Intermediate (A2)

## IT SKILLS

**Programming Languages and libraries**

Java, Python, C, C++, ROS,  
Pandas, numpy

**Web Design**

HTML5, JavaScript, jQuery,  
CSS, Bootstrap

**Database Skill**

PL-SQL, MinIO, MongoDB

**Framework and Tools**

Agile, Waterfall, Jira, extreme  
programming (XP), Kanban

**Cloud**

Amazon Web Service (AWS),  
Azure, Google Cloud Platform

**Version Control and DevOps**

SVN, Git, Docker, Kubernetes,  
Apache Kafka, Argo workflow,  
Terraform

**Microsoft Office**

Word, Excel, PowerPoint,  
Outlook

## PROFESSIONAL EXPERIENCE

Chemovator GmbH (BASF incubator)

Mannheim, Germany

**DATA SCIENTIST INTERN**

*November 2021 – August 2022*

**Technologies Used:** Python, Azure dev-ops, Argo workflow, FastAPI, MIFlow, SHAP, MinIO, Terraform, docker, Kubernetes, CI/CD, Kafka

**Client:** Forecasty.AI

**Responsibilities:**

- Implemented AI-based econometric, ml & deep learning and built scikit-learn pipelines for time series forecasting
- Managed infrastructure automation through Terraform and implemented Kafka in application dealing with sentiment analysis using NLP
- Implementation, testing and platform-integration of state-of-the-art models for data processing and time series forecasting.
- Implemented MLOps through MIFlow which allowed automated model development lifecycle and reduced time for model reproduction by 25%

**Client:** BASF Precious Metal Chemicals & Recycling

**Responsibilities:**

- POC - predicting and simulating crisis for the Platinum Group Metals (PGM) like platinum, palladium and rhodium
- Demystified AI black box model by implementing explainable AI through feature importance and SHAP
- Implemented stacked ensemble and improved model accuracy by 17% by using Meta-Learning.

**Client:** HELM AG

**Responsibilities:**

- POC - accurately predicting methanol prices in US, EU and Asia
- Conveyed the important features to the client through Exploratory Data analysis (EDA)
- Implemented back testing algorithm through walk-forward validation which helped client gained confidence of the model stability and accuracy
- Implemented bootstrapping confidence interval and automated hyperparameter optimization through HyperOpt which increased model accuracy by 31%

Institute of Factory Automation and Production Systems

Erlangen, Germany

**COMPUTER VISION RESEARCH ASSISTANT**

*February 2021 – November 2021*

**Technologies Used:** OpenCV, Keras, Tensorflow, Pytorch, ROS, Unreal Engine 4, Blender

**Client:** Siemens GmbH

**Responsibilities:**

- Automated screw separation, using PyTorch and Deep Object Pose Estimation (DOPE) with YOLO to determine 6-DoF screw in the load carrier.
- Generate synthetic training data sets using the Unreal Engine (UE4) and NVidia Deep Learning Data Synthesizer (NDDS).

Internal

## PERSONAL COMPETENCIES

- Communication
- Cross-functional team
- Time management
- Solution oriented
- Analytical

## CERTIFICATION

### AWS Certified Solutions

#### Architect – Associate

Amazon Web Services (AWS)

### Azure AI Fundamentals

Microsoft Certified

### Professional Scrum Master I (PSMI)

Scrum.org

## TEST SCORES

**TOEFL** 100/120 (C1)

**GRE** 308/340

## SEMINARS

### Weakly Supervised learning in Digital Pathology

Pattern Recognition lab

### Agile Transformation

Open-Source Software lab

## SCHOLARSHIPS

### DAAD PROMOS

FAU, Erlangen, Germany

### ERASMUS+

USI, Lugano, Switzerland

## SOCIAL ENGAGEMENT

### VP of Business development

DEGIS, Erlangen

### Computer Vision developer

EVOLONIC

### Social worker

Calcutta Rescue

## INTERESTS

- Table tennis
- Robotics

## REFERENCES

Available on request

Machine Learning and Data Analytics (MaD) Lab

Erlangen, Germany

### MACHINE LEARNING RESEARCH ASSISTANT

*February 2021 – August 2021*

**Technologies Used:** ML and DL pipelines (CNNs, LSTMs)

**Client:** Stabilo GmbH

#### Responsibilities:

- Online handwriting recognition of IMU-enhanced ballpoint pens with machine learning
- Deliver accuracies of up to 90% for the writer dependent task and 83% for the writer independent task for uppercase letters

Tata Consultancy Services Limited

Kolkata, India

### ASSISTANT SYSTEM ENGINEER & WEB DEVELOPER

*November 2018 – September 2020*

**Technologies Used:** Java/J2EE, HTML5, JavaScript, jQuery, CSS, Bootstrap, Spring, PL-SQL

#### Responsibilities:

- Development and logic building in java using frameworks like struts2 and spring and SQL query generation
- Developing web pages along the UI layout and front-end programming with validations using jQuery

## EDUCATION

Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

Università della Svizzera italiana USI, Lugano, Switzerland

### Double Master degree in Computational Science

*October 2020 – September 2023*

- Grade: 1.8/1.0

Heritage Institute of Technology, Kolkata, India

### Bachelor's degree in Mechanical Engineering

*July 2018*

- Grade: 8.48/10

St. Stephen's School, Kolkata, India

### Indian School Certificate (ISC) (Year-12)

*June 2014*

- Grade: 93%

St. Stephen's School, Kolkata, India

### Indian Certificate of Secondary Examination (ICSE)

*February 2012*

- Grade: 94.14%