

# Jyotirmay Senapati

[senapati.jyotirmay@gmail.com](mailto:senapati.jyotirmay@gmail.com) | +49 176 4711 8982 | Berlin | [Github](#) | [LinkedIn](#)

## TECHNICAL SKILLS

**Proficient:** Python, Django, Flask, Postgres, Docker, CI / CD, Pytorch / NumPy / Pandas / scikit-learn / Matplotlib / NiBabel, Agile/Scrum/Kanban, Deep Learning Products

**Intermediate:** JavaScript / TypeScript, HTML / CSS, Angular, Node, MongoDB, Nginx, AWS / GCP

## WORK EXPERIENCE

**Machine Learning Backend Engineer — 7Learngings GMBH, Berlin (Berlin)** **Apr 2021 - Jul 2021**

*One of the advanced AI based, predictive price optimization solution provider in Germany*

- **Tech stack: Python, Django, Postgres, Git-Workflows(CI/CD), ML-Ops, Big-Query, Streamlit, Angular, GCP**
- Implemented tools (Tensorboard, Streamlit) on GCP to increase efficiency of the data-science team by 10%.
- Optimized the production workflow by automating CI/CD pipeline using git-actions and git-checks.

**Machine Learning Research Assistant — AI-Med, LMU Munich (Munich)** **Apr 2019 - Feb 2021**

*Research group for AI in Medical Imaging, lead by Prof. Wachinger; develops machine learning models for healthcare*

- **Tech stack: Python, Flask, Docker, PyTorch, scikit-learn/Pandas/Matplotlib/NumPy/NiBabel, Nginx, AWS**
- Offered to work full-time starting in August 2020 after successfully working together on Master thesis
- Implemented state of the art deep learning models (Quicknat, U-Nets) for liver and spleen segmentation using nnU-net, Octave-Conv, SWA, SWAG, Thick-slices, Multi-phases
- Developed data pre-processing pipelines to prepare 23.000+ MRI scans for input into deep learning segmentation
- Built web application using Python/Flask/Docker to visualise MRI scans and its segmentations/heatmaps predicted by machine learning models; deployed using AWS EC2/S3/Lambda

**Machine Learning Research (intern) — Disney Research Lab (Zurich)** **Nov 2018 - Feb 2019**

- **Tech stack: Python, Keras, Pandas/Matplotlib/NumPy**
- Collected, cleaned and prepared datasets of facial expressions (e.g. cry, yawn) to be used to classify emotional reactions of movie viewers and measure which pieces of a movie are engaging
- Developed deep learning CNN models to classify 8 basic facial expressions from Cohn-Kanade dataset

**Data Engineer (working student) — Quant-IP (Munich)** **Mar 2018 - Oct 2018**

*quant-ip.com is a data provider serving large financial institutions*

- **Tech stack: Python, Flask, TypeScript/JavaScript, Angular, Ionic**
- Built web application to visualise financial data and innovation score using Flask/Plotly at Bloomberg Magic
- Developed web and mobile application in Flask, Angular and Ionic to analyse and visualise company innovations and growth, based on patent data

**Software engineer — Pega System (Bangalore, India)** **Mar 2016 - Mar 2017**

*American software company for customer relationship management and digital process automation*

- **Tech stack: JavaScript, HTML5, CSS**
- Solved client issues in their web applications using JavaScript, HTML and CSS
- Trained 5 new employees as part of Pega recruitment and UI technology training group

**Software engineer — Tata Consultancy Services (Bangalore, India)** **Mar 2014 - Mar 2016**

*Indian IT services and consulting company, largest company by market capitalization in India*

- **Tech stack: JavaScript/TypeScript, Angular, Node, MongoDB, HTML, CSS, PHP, MySQL**
- Awarded TCS GEMS award for excellent coding skills among 500 co-workers at the Qualcomm account
- Managed and improved data consistency of 200.000+ records across 500 MySQL tables for Qualcomm application
- Developed user & administration interface and CRON tasks for Qualcomm learning management web application
- Built hybrid app with Angular used by employees of Qualcomm and TCS

## EDUCATION

**M.Sc. Informatics — TU Munich (Munich)** **2017 - 2020**

- Above-average student with GPA 2.1 and [master thesis](#) which was accepted at MLMI2020 (machine learning conference on medical imaging): Analysed deep learning model accuracy using PyTorch/scikit-learn/NumPy; compared 4 state of the art Bayesian neural networks for image segmentation and developed improvements
- **i-Graph project:** Wrote web application in TypeScript using RASA-NLU to translate language into SQL queries
- **Expression prediction project:** Detected emotions on image and video data using PyTorch and OpenCV
- **Allianz HackaTUM-2019:** Won 1st prize out of 37 teams for detecting cracks on metal using image analysis

**Bachelor Electronics and Communications — Gandhi Institute (Gunupur, India)** **2009 - 2013**

- Above-average student (top 15%, GPA 8.3); wrote bachelor thesis detecting cracks in railway tracks based on data

## OTHER

**Languages:** English (very good), German (basics)