Jyotirmay Senapati

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Technical Skills

Proficient: Python, Fastapi, Postgres, Docker, CI / CD, Celery, NumPy / Pandas / scikit-learn, Kubernetes / Helm, Agile / Scrum
Intermediate: Vue3 / JavaScript / TypeScript, HTML / CSS, Nginx, Azure, Machine Learning Products

Work Experience

Senior Software Engineer — Prestatech GMBH, Berlin (Berlin) **Apr 2021 - Present**
One of the advanced API based and Cloud-AI-backed Banking Analytics, and Instant Lending solutions provider.
Tech stack: Python, Fastapi, Azure DevOps, Kubernetes, Helm, Docker, Postman API, Vue3, Postgres, Celery

- Migrated 22 microservices from Azure Functions to Kubernetes using Helm charts.
- Improved service performances and cost optimization by 30%.
- Data obfuscation improvisation with Kubernetes and Celery for 40 million transaction with in 4 hours.
- End-to-end development & management of 6 unique APIs for the data-science team. One of the main products.
- Build an internal tool to use 6 important DS services for faster RnD. Used celery to optimize process'.

Machine Learning Research Assistant — AI-Med, LMU Munich (Munich) **Apr 2019 - Feb 2021**
Research group for AI in Medical Imaging, led by Prof. Wachinger; develops machine learning models for healthcare.

- **Tech stack: Python, Flask, Docker, PyTorch, sci-kit-learn/Pandas/Matplotlib/NumPy/NiBabel, Nginx, AWS**
- Offered to work full-time starting in August 2020 after successfully working together on a Master thesis.
- Implemented state of the art deep learning models (Quicknat, U-Nets) for liver and spleen segmentation
- 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 visualize 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 the 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 visualize financial data and innovation score using Flask/Plotly at Bloomberg Magic
- Developed web and mobile application in Flask, Angular, and Ionic to analyze and visualize 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, the 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
- Built hybrid app with Angular used by employees of Qualcomm and TCS

Education

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

- An above-average student with a GPA of 2.1 and master thesis which was accepted at MLMI2020 (machine learning conference on medical imaging): Analysed DL model accuracy using PyTorch/sci-kit learn/NumPy; compared 4 states 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 (A2.1)