Anubrata Bhowmick

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SUMMARY

Highly accomplished Research Scientist and Product Manager with a proven track record at Quest Innovations. Successfully led the Data and AI analytics and research management for Quest and Olympus, driving innovation and advancements in the next generation of surgical products. Exceptional expertise in Machine Learning, Deep Learning, and Graph Neural Networks, applying these cutting-edge technologies to enhance surgical technologies. Demonstrated outstanding programming skills in Python and C++, substantiated by participation in the prestigious ACM-ICPC Northwest European Regionals. A dynamic professional who excels in combining technical provess with strategic leadership to deliver exceptional results.

Work Experience

Research Scientist at Quest Innovations

Feb. 2023 - present

- Led a consortium focused on advancing surgical guidance products aimed at assisting doctors in effectively differentiating between various tissues using Olympus surgical cameras.
- Spearheaded research and development efforts to create cutting-edge tissue segmentation algorithms specifically designed for hyperspectral imaging.
- Collaborated closely with a multidisciplinary team of researchers, engineers, and medical professionals to drive innovation and achieve breakthroughs in surgical imaging technology.
- Played a pivotal role in the development and implementation of advanced algorithms that enhance the accuracy and efficiency of tissue segmentation, contributing to improved surgical outcomes and patient care.

Data and AI Scientist - Management Trainee at Philips Research Sept. 2021 - Feb. 2023

- Researched and developed the Floor Hopping Analysis Tool, a groundbreaking solution that integrates wi-fi data with asset localization to optimize the placement of exciters in hospitals. This innovative approach resulted in significant cost savings of over 10,000 euros per hospital, with a patent filed to protect intellectual property rights.
- Pioneered the development of the Quantized Aware Baby detection algorithm, a cutting-edge technology specifically designed for resource-constrained devices. This breakthrough enabled the successful launch of the 2nd generation baby monitor, capturing a substantial market share of approximately 42% worldwide.
- Demonstrated exceptional research and development skills, leveraging advanced techniques to drive product innovation, cost savings, and market expansion.
- Collaborated with cross-functional teams, including engineers, designers, and marketing professionals, to successfully deliver high-quality and market-leading solutions.

- Conducted extensive research and successfully developed a robust classification algorithm to identify and blacklist customers based on behavior patterns. This groundbreaking solution significantly improved the worldwide retention rate of TCS BaNCS, reaching an impressive 90% and preventing millions of fraudulent transactions.
- Led multiple product development initiatives and played a key role in enhancing various aspects of TCS BaNCS. Notable contributions include the implementation of the customer blacklisting feature, the development of the BaNCS payment system, and the creation of a new insurance product pipeline. These efforts propelled TCS BaNCS to achieve an outstanding annual growth rate of over 60%.
- Demonstrated exceptional technical expertise, innovation, and strategic thinking in driving product development and enhancing the competitiveness of TCS BaNCS in the market.
- Collaborated closely with cross-functional teams, including engineers, product managers, and stake-holders, to successfully deliver high-impact solutions that met the evolving needs of customers and contributed to the overall success of the organization.

EDUCATION

2019 - 2021 Master of Science: Computer Science(Data Science) at University of Twente

2012 - 2016 Bachelor of Technology: Information Technology at Bengal Institute of Technology

Publications

Bhowmick, Anubrata (2021). "Markers of Brain Resilience". In: *University of Twente*. URL: https://essay.utwente.nl/87777/1/Bhowmick_MA_EEMCS.pdf.

Bhowmick Anubrata Singhal Ashish, Wang Shenghui (2021). "Augmenting context-aware citation recommendations with citation and co-authorship history". In: 18th International Conference on Scientometrics and Informetrics, ISSI 2021, pp. 115-120. URL: https://ris.utwente.nl/ws/files/274628660/augmenting_bhowmick.pdf.

Bhowmick Anubrata Khandelwal Manoj Amit, Kang Jeffrey (2022). "Baby Positioning using Quantization Aware Training for Edge Devices". In: OCUPAI+ 2022, Philips.

SKILLS

Programming Python, C++, Java

DevOps GiT, Docker, Kubernetes, Bash Scripting, CI/CD, AWS, ElasticSearch

Data Engineering Kafka, Hadoop, PySpark

Databases PL/SQL, MySQL

Industry Knowledge Deep Learning, Brain Computer Interface, Medical Imaging, Computer Vision,

Data Science

Interpersonal Skills Leadership, Public Speaking, Data Strategy