

Arushi is an exceptionally skilled and dynamic software engineer with a rich background spanning **frontend development, full-stack engineering, artificial intelligence, machine learning, and data science**. Having worked at some of the most prestigious companies in the world, including **Tesla, Amazon Robotics, and ChaosSearch**, Arushi has built a reputation for delivering impactful technological solutions that enhance performance, optimize workflows, and push the boundaries of innovation.

Currently, Arushi is a **Software Engineer at ChaosSearch**, where she plays a pivotal role in **developing scalable and responsive UI components** using **TypeScript, React, and Angular**, while seamlessly integrating with **Python and Scala backend architectures**. She has been instrumental in shaping the **OpenSearch Dashboards**, tailoring them to fit **customer and application needs** by incorporating **advanced UI capabilities and object group features**. She has contributed significantly to the implementation of **GenAI SQL querying**, an enhancement that has improved data interaction within the application. Furthermore, she has spearheaded **API migrations and view transformations**, ensuring a seamless transition to more efficient systems. Her work in integrating **automated UI testing suites** has substantially boosted **application reliability and performance**. By proactively incorporating customer feedback, she has played a major role in enhancing **user engagement and satisfaction**, working closely with **platform and product teams** to align solutions with both **customer expectations and technical requirements**. Her deep involvement in **design discussions, performance optimization, and debugging efforts** has helped drive key product features forward, making her an invaluable asset to the company.

Before joining ChaosSearch, Arushi had the opportunity to work at **Tesla** as a **Software Engineer Intern**. During her tenure, she worked on **improving data visualization applications** that streamlined Tesla's **manufacturing data management**, ultimately leading to a **20% reduction in operational costs**. Her work focused on **UI dashboards and complex data visualizations**, which were deployed across **Tesla factories worldwide**. Beyond frontend development, she contributed to **data-driven decision-making** by leveraging **Keras and Scikit-learn** to develop **predictive analytics models** that optimized manufacturing workflows. She also **optimized API performance** and significantly **improved data rendering speeds**, enhancing the responsiveness of Tesla's internal data visualization tools. Working closely with **data engineers and analysts**, she helped integrate **large-scale manufacturing datasets** into an **interactive, insightful dashboard** used for critical decision-making at Tesla's production sites.

Prior to Tesla, Arushi held a **Software Engineer Co-op position at Amazon Robotics**, where she played a fundamental role in designing and developing a **proprietary React component library** that served as an **internal UI design blueprint** for the department. This foundational work contributed to the **standardization and consistency of UI elements** across internal platforms. She was also deeply involved in **real-time data visualization for robotic hardware**

management, working with **Python and Computer Vision tools** to enhance **robotic performance monitoring and analysis**. Her expertise in **TypeScript, React, SASS, AWS CDK, CI/CD systems, and Amazon's proprietary tools** was instrumental in ensuring that **UI components and visualizations aligned seamlessly with robotics workflows**. Her ability to **collaborate with multidisciplinary teams** helped in building systems that could **scale efficiently and provide intuitive insights into robotic operations**.

Beyond her industry experience, Arushi has also contributed to **user experience research** at **Northeastern University IT Services**, where she worked as a **UX Research Digital Experience Assistant**. Here, she helped **improve the Student Services Portal and Student Hub**, leading to a **16% increase in site traffic**. Her research helped in refining **UI/UX design choices** to create a more **intuitive and engaging digital experience** for students.

Arushi's technical expertise is not limited to industry roles—she has also engaged in **cutting-edge AI and machine learning research**. As a **Computational Biology Research Intern at the Council of Scientific and Industrial Research (CSIR) in New Delhi, India**, she worked on **cancer research**, analyzing **over 25,000 SRC Kinase protein mutations** to predict their **significance in cancer progression**. She developed **machine learning models using Scikit-learn, TensorFlow, and Keras**, which successfully reduced **wet lab experiment time by 40%** by accurately predicting which mutations required further laboratory validation.

Further deepening her research experience, Arushi took on a **Data Science and Machine Learning Research Internship at the Technical University of Munich**. Here, she developed a **prediction model using TensorFlow, PyTorch, OpenCV, and Scikit-learn** to analyze the probability of **fish survival and injuries** as they passed through **hydroelectric turbines** in the **Isar River near Munich**. Working with a dataset of over **10,000 fish injury and mortality samples**, she was able to develop models that significantly improved **ecological and engineering decision-making** regarding hydroelectric power operations. Additionally, she played a key role in **educating ecology and biology researchers** by conducting workshops on **machine learning applications in ecological studies**.

Arushi's technical skillset is vast and deep, spanning **multiple programming languages, frameworks, and AI technologies**. She is proficient in **JavaScript (ES6), TypeScript, Python, C, C++, Java, Perl, and R**, and has extensive experience with **frontend and backend development** using **React, Next.js, Angular, Node.js, Express, PostgreSQL, MySQL, and MongoDB**. Her expertise in **data science and AI** covers **Scikit-learn, TensorFlow, PyTorch, LangChain, OpenAI, Generative AI, LLM fine-tuning, Retrieval-Augmented Generation (RAG), and Human-AI Interaction**. Additionally, she has experience working with **Adobe Photoshop, Figma, Procreate, Canva, Agile workflows, and CI/CD pipelines**.

Adding to her academic credentials, Arushi has **published research papers in IEEE Xplore, Springer, Elsevier, and the International Journal of Pure and Applied Mathematics**, contributing to the broader knowledge base of **machine**

learning applications in scientific research.

Her recent AI-focused projects include developing **My AI Assistant**, an OpenAI-powered chatbot that provides recruiters and interested parties with an easy way to **learn about her professional experience** through **LangChain and RAG**. She has also built an **AI Book Recommender** using **Hugging Face NLP models** and a **RAG Chatbot** designed to answer **PDF-based queries**.

With a strong foundation in **software engineering, AI/ML, research, and user experience design**, Arushi Agarwal stands out as an **exceptionally well-rounded technologist** who can thrive in **high-impact roles at the intersection of technology and innovation**. Her ability to seamlessly bridge **frontend and backend development with AI-driven solutions** makes her an **invaluable asset to any organization looking to push technological boundaries**. Her experience working at **top-tier companies and research institutions** underscores her ability to tackle **complex problems, innovate, and drive meaningful impact** in any technical domain.

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