TUSHAR AGGARWAL

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EDUCATION

Delhi Technological University | Bachelor of Technology - Mechanical with specialization in Automotive| (GPA: 8.08/10)   Aug'18-May'22

- *Relevant Courses:* Programming Fundamentals, DSA, Operating Systems, Computer Networking, Python, Competitive Programming
- *Scholastic Achievement:* Department Rank 1 in junior year in a batch of 65 students.
- *Publication:* T. Aggarwal et al. "Energy Storage System with Artificial Neural Networks using PI Hybrid Controllers," IEEE PECCON 22
- Proposed a unique method of error reduction by using an ANN and pi controller together for noise fluctuations.
- *Team DTU Supermileage* | Student Advisor and Head (Electronics Department)
- Spearheaded a team of 50+ members to design an in-wheel suspension by significantly reducing weight by **12%**, improved the mileage.
- Achieved top 3 ranks out of 132 teams in "Shell Eco-Marathon" competition.
- Developed a "Driver's Drowsiness Detector" (ADAS Feature) program utilizing OpenCV and dlib library modules.
- Nominated in the Safety Award category in the Shell Eco-Marathon competition 2021.
- *Summer Research Intern* | **CFEES, DRDO, Delhi** - Post test analysis of fields tests conducted on sustainer motor of propulsion system.

WORK EXPERIENCE

Chegg | Software Development Engineer & Subject Matter Expert   Jan'22 – Present

~ 1.8 years of experience as a Software Developer & SME. Solely responsible for implementation and design of SME dashboard, ensuring smooth operations. Managed global technical tutoring for students, achieving key metrics.

- **Product Development**
- Spearheaded the design and implementation of an SME dashboard for Chegg's Skills department comprising 50 members.
- Utilized ReactJS and Express for seamless integration of Authentication, Authorization, and infrastructure setup.
- Demonstrated a proactive approach to troubleshooting, ensuring the smooth operation of the SME dashboard.
- Implemented robust data management practices using PostgreSQL for secure and efficient handling of critical information.
- Empowered members with a performance review feature, enabling managers to provide constructive feedback.
- **Technical Tutoring**
- Led the management of live technical tutoring for a diverse student base of 2000+, enhancing the overall educational experience.
- Effectively addressed technical questions and reviewed checkpoint submissions, ensuring the quality and relevance of the learning material.
- Engaged with students on a one-to-one basis from across the globe, providing timely and accurate solutions to their doubts.
- Achieved key performance metrics to meet customer SLAs, demonstrating a commitment to excellence in service delivery.

Coding Minutes | Fullstack Developer Intern   May' 21 – Jan'22

~ 8 months of experience as a Developer, integrated microservice while working cross-team to ensure proper migration of all the notifications.
- Curated an online IDE which can instantly build, compile, and test programs online using ReactJS and Django.
- Built authentication microservice and integrated it with the frontend for Google and GitHub OAuth.
- Designed and implemented a code file management microservice with an integrated frontend UI.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.

PROJECTS

Customer Churn Prediction   Nov'23
- Engineered a robust machine learning model, to predict customer churn in banking.
- Conducted in-depth analysis and visualization with Matplotlib, revealing patterns and factors influencing customer churn.
- Applied advanced techniques like Random Forest and Ensemble Learning, providing strategic insights for effective decision-making in customer retention strategies.

Titanic Survial Prediction   Oct'23
- Developed an advanced machine learning model for predicting passenger survival in the Titanic shipwreck.
- Conducted comprehensive data analysis and visualization with Matplotlib and Seaborn, uncovering patterns and trends in the Titanic dataset.
- Applied Decision Tree algorithms, providing valuable insights for data-driven decision-making, enhancing the project's success.

Support Desk   Sep'23
- Led the development of a Full Stack application for efficient ticket management. Implemented user authentication for controlled access.
- Implemented features enabling staff to leave notes on tickets and update ticket statuses for enhanced collaboration.
- Utilized ReactJS, NodeJS, MongoDB, ExpressJS, Redux. and JWT for seamless integration.

iNotebook   July'23
- Developed a sophisticated cloud-based iNotebook, offering a secure and accessible platform for note storage and organization.
- Implemented robust user authentication protocols to ensure privacy and security, allowing users to access their notes securely.
- Utilized MongoDB, ExpressJS, ReactJS, and NodeJS for a scalable and user-friendly platform

TECHNICAL SKILLS

- **Languages:** Python, Java, C++, HTML/CSS, JavaScript, SQL
- **Framework, Tools & Libraries**: NodeJS, ExpressJS, ReactJS, Git, NumPy, Pandas, Matplotlib, TensorFlow, OpenCV
- **Interpersonal Skills**: Written & Verbal Communication, Critical Thinking, Problem-solving, Time Management

LEADERSHIP POSITIONS AND EXTRA-CURRICULAR ACTIVITIES

- **Those in Need** | Volunteer
- **Product Development**: Led the development of a user-friendly chatbot-integrated web app, facilitating pandemic fundraising.
- **Social Initiative**: Dedicated to fostering educational development through learning workshops for children, organizing impactful social welfare programs for community engagement, and advocating for workplace inclusivity by educating peers about gender diversity.
- Selected among the top **20** projects to represent India at Intel ISEF 2017, showcasing excellence and innovation on an international platform.
- **Community Manager, Coding Blocks**, Delhi, ed-tech platform offering programming courses, team of 100+, managed and recruited 250+ campus ambassadors (**from 400+ prospects**), increased revenue by **30%**.
- **Head, Marketing & Outreach, DTU Cultural Council**, Delhi; helped in successfully curating North India's biggest cultural fest, Engifest **100k+** footfall and raised **$100k** from 50+ sponsors.