Rishabh Kamal

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Academic Qualifications

Year	Degree/Certificate	Institute	
2020 - Present	B.Tech	**Indian Institute of Technology Kanpur**	
2019	Class XII (CBSE)	MANTORA PUBLIC SCHOOL, KANPUR	
2017	Class X (CBSE)	DR V.S.E.C panki, KANPUR	

Key Projects & Workshops

LYFT (FULLSTACK))

JUN'23-JUL'23

Aim	•Apply expertise in software architecture,refactoring, unit testing,test-driven development to elevate project quality and innovation.
Tasks	•Software Architecture: Designed scalable solutions, optimizing performance. Implemented microservices architecture for stability. •Refactoring:Improved code quality byrefactoring legacy systems.Transformed apps into microservices, streamlining updates. •Unit Testing: Developed rigorous test suites, reducing defects. Enhanced software stability and user experience. •Test-Driven Development: Practiced TDD for predictable code. Integrated principles, ensuring robust, well-tested solutions.
Progress	• **E**mployed advanced software architecture, refactoring, unit testing, and TDD. Led scalable design, revamped legacy code, and drove rigorous testing for improved quality and rapid feature delivery

JP.MORGAN CHASE (COMMERCIAL BANKING)

21JUL'23-17AUG'23

Aim	•Utilized JP Morgan Chase Commercial Banking Virtual Experience to refine financial analysis through real-world scenario modeling and quantitative assessments.
Tasks	•Analyzed the latest financial statement to extract key insights and trends. •Created a Capitalization Table to outline the company's equity ownership structure. •Compiled a detailed company and industry overview to provide context. •Developed a comprehensive deal structure overview page, integrating quantitative and qualitative analyses. •Formulated a 10-year Financial Model Forecast to project future performance.
Progress	• Proficiently managed tasks, refining analytical skills, gaining hands-on financial modeling expertise. Strengthened ability to interpret complex financial data for informed decisions.

ACCENTURE (Developer and Technology programme)

Jul'23-Aug'23

Aim	•Leveraged the Accenture Developer and Technology Programme to enhance technical prowess by immersing in software development, testing methodologies, and algorithmic thinking.
Tasks	•Analyzed financial statements for strategic insights and gained Algorithmic Thinking expertise. •Explored diverse tech career pathways and honed Code Debugging skills. •Engaged in complete SDLC, mastering Waterfall and Agile methodologies, and actively participated in Knowledge Checks.
Progress	• Strengthened expertise in software development, testing, and algorithmic thinking. Acquired hands-on code debugging skills, enhancing readiness for impactful roles in technology

ACCENTURE ((Data Analytics and Visualization)|self project

Aug'23 - Present

Aim	•Utilized the Accenture Data Analytics and Visualization Programme to refine skills in project comprehension, data modeling, visualization, and client communication..
Tasks	•Attained project insights, understanding objectives, enhancing project comprehension and alignment with goals. •Proficiently performed data cleaning and modeling tasks, ensuring accuracy and reliability in the analytical process. •Enhanced data visualization and storytelling skills, resulting in compelling presentations of insights to clients.
Progress	•Within the Accenture Data Analytics and Visualization Programme, I enhanced project comprehension, executed robust data processes, and mastered impactful data visualization and storytelling. Proficiently presenting insights to clients write in technical

PWC(Cyber Security Consulting)

Jul'23-Aug'23

Aim	•To increase proficiency in risk assessment, the software development lifecycle (SDLC), IT general controls (ITGC), and controls presentation by leveraging PWC Cyber Security Consulting.
Tasks	•Conducted risk assessment and engaged in SDLC walkthrough. •Executed IT General Controls (ITGC) Test of Design and Operating Effectiveness. •Prepared a comprehensive Controls Testing Summary Presentation.
Progress	•In the PWC Cyber Security Consulting experience, I advanced expertise in risk assessment, navigated SDLC adeptly, performed precise ITGC tests, and delivered an insightful Controls Testing Summary Presentation, showcasing my ability to contribute to effective cyber security practices.

MD Simulation for CH4 Simulation | SimuTech project - Chemineers Society, IIT KANPUR

Feb'22 - Jan'22

- **Aim:** Apply Lammps scripting and OVITO visualization skills to simulate molecular systems, analyze thermodynamics, and enhance proficiency in computational chemistry
- **Task:** Utilized Lammps for molecular system simulation and OVITO for visualization.
  •Generated graphs to illustrate thermodynamic variables using simulation statistics.
  •Analyzed Radial Distribution Function (RDF) plots for atom interactions.
  •Collected data from around 1 million Lammps simulations: nvp/npt steps, temperature, pressure, volume, and energy.
- **Result:**skillfully performed molecular simulations, extracted thermodynamic insights, and analyzed atom interactions using Lammps scripting and OVITO visualization, advancing computational chemistry expertise.

Vapour/Liquid Equilibrium Analysis | Course Project(Che221A), IIT KANPUR *Jan'22 - May'22*

- **Aim:** Employed Antoine's Equation and Wilson's Activity Coefficient Model for comprehensive analysis of vapour-liquid equilibrium and thermodynamic parameters for the 4 METHYLPHENOL 1-TETRADECANOL system.
- **Task:** Utilized Antoine's Equation and Wilson's Activity Coefficient Model for in-depth analysis of vapour-liquid equilibrium and associated thermodynamic parameters for the 4 METHYLPHENOL 1-TETRADECANOL mixture.
- **Result:** By employing Antoine's Equation and Wilson's Activity Coefficient Model, a rigorous analysis of vapour-liquid equilibrium and thermodynamic parameters was performed for the 4 METHYLPHENOL 1-TETRADECANOL system. The results were effectively compared with experimental data, enhancing understanding of the system's behavior.

Vertical Axis Wind Turbine | Course Project (SEE614A) | Dr. Debopam Das J *March'23-APR'23*

- Designed and Fabricated a flapping type VAWT (both Drag and Lift based) consisting of 12 folding airfoil blades
- Implemented a 2-stack design of folding airfoil blades at an offset of 60 degrees for better aerodynamic performance
- Utilized symmetric NACA0015 airfoil blades fabricated from PVC foam for rigid and lightweight characteristics
- Achieved a minimum threshold speed of 10 m/s and a maximum speed of 40 m/s upon subjecting to wind flow

Reactor Sizing in Chemical Reaction Engineering | Course Project(che331A) | Dr. Nishith Verma *March'23-APR'23*

- Developed a functional MATLAB code capable of calculating the minimum volume required for different reactor system
- Utilized fundamental principles of Chemical Reaction Engineering including reaction kinectics,mass balance and reactor design equation to determine the minimum volume required for different reactor system of PFR and CSTR
- Implemented appropriate numerical techniques to handle the given parameters and optimize the reactor sizing.

C++ project)

- **Aim:** Utilized HTML, CSS, and JavaScript to create a program on DEV C++, focusing on front-end development *Mar'22 - JUl'22*
- Projects Developed a Spotify Clone **(Front-End Development)**, emulating its user interface and functionalities. Designed a Bank Open Account System, enhancing user experience through intuitive front-end design.

Market_Prediction using ml)

- **Aim:** Develop a precise machine learning model for S&P 500 predictions.
- **Task:**Enhanced RandomForest with rolling averages, assessed precision, and performance via backtesting. .
- **Result:**Achieved 0.57 precision, predicting price changes with 55% accuracy. Backtesting reveals evolving prediction efficacy, providing valuable insights for informed investment decisions.

Email Spam Detector using ml

- **Aim:**Develop a Streamlit-based Email/SMS Spam Classifier.
- **TasK:**Implement text preprocessing, integrate a pre-trained model, and create a user-friendly interface.
- **Result:**A functional web app enabling users to input messages for spam classification, enhancing communication security and efficiency.

Credit card fraud detection)

- **Aim:** Develop a precise credit card fraud detection model using SVM, emphasizing high precision and recall for transaction security.
- **Task:**Explore, preprocess the dataset, implement SVM, and prioritize precision and recall. Present results through a detailed report and confusion matrix.
- **Result:** SVM: 99.94% accuracy, 100% normal transactions, 95% precision for fraud. Macro avg precision/recall: 97%/82%, showcasing robust real-world fraud detection.

Relevant Courses

Fundamental of Computing	Thermodynamics
Computational Methods in Engineering	Manufacturing Processes
Nature and Properties of Materials	Process Control
Chemical Engineering Thermodynamics	Fluid Mechanics and its Applications
Heat Transfer and its Applications	Mass Transfer and its Applications
Chemical Reaction Engineering	Chemical Process Simulation

Online Coursework

- **Analytics in Finance:** Applied advanced analytics techniques to Retail Banking, Commercial Banking, and Asset Management domains, optimizing financial strategies through data-driven insights.
- **Google Analytics :** Demonstrated mastery in Google Analytics, encompassing comprehensive data collection, in-depth analysis, insightful

Technical Skills

- **Programming Languages:** C, C++, JavaScript, Python, Java, HTML, JAVASCRIPT, CSS
- **Libraries:** Tensorflow, Keras, Numpy, Matplotlib, Pandas, OpenCV, Scipy, Seaborn
- **Software:** Fusion 360, MATLAB, AutoCAD, LAMMPS, OVITO,SaaS
- **Utilities and Tools:** Git, GitHub, LaTeX, VS Code

Extra-Curricular Activities

- CAMPAIGN MANAGER in BT/BS SENATOR Y20 Election
- Engaged in the CHESS competition hosted by IIT Kanpur's CHESS Club
- Quaterfinals in the Warfire Battlegrounds Mobile India (BGMI) event organized by Antaragni'21, IIT Kanpur.
- Contributed to the Hindi Sahitya Sabha competition at IIT Kanpur.
- Actively participated in the Udghosh 21' online athletics quiz.