

ANAND N. PATHAK

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DOB: 7th March 1991

Resume Summary:

ARAI-M-Tech professional in Internal Combustion Engine and currently working as CFD team Technical lead having 7 Years 5 months of experience in computational fluid dynamics(CFD) of Automobile Air filtration, Liquid filtration & Air cooling. Mainly working on products like Air Intake System, Air Cleaner, Oil filter, Fuel filter, Carbon Canister, Air Intake manifold, Intercooler pipe, EGR pipe, Water Pump, Thermostat, Bypass Valve, Strainer, Expansion tank and high pressure duct of passenger car of Indian OEM, European OEM and Japanese OEM using Star CCM+ which includes Steady, Transient and multiphase analysis consists of internal flow analysis, Pressure drop analysis, Dispersion analysis, AFM analysis, air entrainment analysis, Lagrangian Particle tracking, design optimization, filter media selection. For predicting minimum pressure drop, maximum filtration efficiency, maximum flow uniformity and emission control characteristics of filtration and maximum pressure rise and no cavitation in water pump also air entrainment in expansion tank.

Software Skills: STAR CCM+, ANSYS, FLUENT, AVL Boost, UG-NX, Catia, GT power

Technical Skills: 1) Complex analysis performance optimization 2) Performing Steady, Transient(Un-steady), Multiphase, Particle tracking, Rigid body motion, MRF analysis. 3) Test-CAE correlation & Validation. 4) Analysis automation 5) Performance improvement & Cost saving VAVE Proposal 6) Team management, employee skill setting.

Previous working organization: SOGEFI, ROKI R&D India Pvt Ltd and Varroc polymer technical centre.

Current working organization- ROKI R&D India Pvt Ltd

Work Experience: CFD Team Technical Lead- ROKI R&D India Pvt Ltd (May 2021)

Gurugram

Responsibility:

- Responsible for all type of analysis like steady, transient, multiphase, LMP, rigid body motion of CFD simulation of Air Filtration, Liquid Filtration and Air Cooling products.
- Individually performing analysis to improve performance parameter & design optimization as per the customer target for Air intake system, Air filter, EGR, High pressure duct, Strainer, Air intake manifold, Expansion tank fuel filter, oil filter, carbon canister, water pump, thermostat etc.
- Responsible for pressure drop, flow uniformity, AFM analysis sensitivity for design optimization.
- Responsible for analysis result accuracy, results correlation and Task efficiency.
- Responsible for analysis results & its countermeasure discussion with cross functional team if CFD result has effect on other IL performance and FEA performance.
- Working as an individual performer and leading CFD team of 4 people and responsible for completion of all CFD analysis on time with 100% of accuracy along with achieving target criteria
- Responsible for managing analysis planning, scheduling, work distribution, technical review documentation & presentation to the customer, team mentoring and skill development training plan.

Achievements:

- Learned and created analysis procedure along with training manual for transient multiphase analysis for expansion tank.
- Recently achieved 100% analysis accuracy, time line adherence, task efficiency in 4 RFQ and later on business was awarded.
- Developed modules for 100% analysis accuracy like quality tracker sheet & Countermeasures for performance improvement
- Awarded for the best performer of the year & best team leader.

Work Experience: Senior CFD Analyst-SOGEFI (March 2018 to April 2021)**Gurugram****Responsibility:**

- Responsible for Asian & European CFD analysis project Air Filtration, Liquid Filtration and Air Cooling products like Air intake system, Air intake manifold, fuel filter, oil filter, carbon canister, water pump, thermostat etc. consist of pressure drop, AFM analysis, pressure dispersion and pressure rise
- Responsible for Test-CAE correlation and validations

Achievements:

- Developed analysis procedure for Transient EGR, Purge, PCV, carbon canister pressure drop & improved water pump module development & Macros to reduce analysis time & increase accuracy
- Received appreciation from the customer for the transient EGR distribution in air intake manifold
- Worked on most recent business win project, Air Intake manifold, Air Intake system, Water pump, Cam cover head for Indian OEM, MNC and European OEM.
- Working onsite at SOGEFI France for the customer like BMW, AUDI, PSA etc.

Work Experience: CFD Engineer- ROKI R&D India Pvt Ltd. (March 2017 to Feb 2018)**Gurugram****Responsibility:**

- CFD simulation of Air Cleaner, Air Intake system, Intake Manifold & EGR Pipe.
- Carry out analysis like pressure drop, flow uniformity over element surface & MAF analysis.
- Carry out analysis as per Standard to achieve the pressure drop, DHC and filtration efficiency.

Achievements:

- Successfully completed 4 Air Cleaner and Air intake system RFQ projects within given time frame and part of project award.

Work Experience: Asst. MG CFD Analyst Varroc polymers Tech. Centre) (Dec 2015 to March 2017) Aurangabad**Responsibility:**

- Design and development for DHC & Pressure drop performance optimization of Air cleaner.
- Analysed & predicted the filter resistance properties like inertial resistance and viscous resistance based on nature of flow and type of media through testing and simulation & filter selection
- Worked on Multiphase Modelling for path tracking of dust particles through air filter housing.
- Working on Acoustic analysis of Air filter and aerodynamics of mirror.

Achievements:

- Design optimization of Bajaj Pulsar 200RS Air Filter performance from foam to paper filter
- Multiphase modelling of Cyclone separator air filter with dust particles separation.
- Design optimization proposal for uniform flow distribution, minimum pressure drop based on different air cleaner configuration & DHC improvement with oil impregnated filter

Project Experience: (MTech-2015)- Project intern at College of Military Engineering, Pune (Dec2014-July2015)**Numerical Modelling of Natural gas fuelled Single cylinder SI engine with EGR using AVL Boost****Training Attended: Automotive engine emission, engine combustion, design development & powertrain NVH (ARAI)****Project Experience: Continuous Variable Transmission (B Tech 2012) & Camless Engine (B Tech 2011)****Education: MTech- IC ENGINE (ARAI) with 8.3 CGPA (2015)**BE Mechanical with **67%** aggregate (2012)**Personnel Information: Sex:**

Male

Hobbies:

Playing cricket, Playing chess, listening songs, reading books

Languages known:

English, Hindi, Marathi

Strength:

Hard working ability, Good analytical & Leadership skill, Mentorship

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