AKASH SURIYA NARAYANAN

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PROFESSIONAL SUMMARY

Chemical engineer with 2+ years of industry experience at a global abrasives manufacturer, currently pursuing an M.Sc. at the University of Padova. Hands-on expertise in Aspen Plus process simulation, CAPEX project execution, and production optimisation. Experienced in applying engineering principles to real industrial challenges, with a strong focus on sustainable and efficient process design. Erasmus+ alumnus with multicultural project experience across five European universities.

EDUCATION

M.Sc. Chemical and Process Engineering | *University of Padova, Italy* — Sep 2024 – Dec 2026 (Expected)
Industrial Thesis: Aspen Plus process simulation project (company details confidential)

B.Tech Chemical Engineering | *SASTRA University, India* — Jul 2018 – Sep 2022

WORK EXPERIENCE

Executive – Production | *Carborundum Universal Limited, India* — Aug 2022 – Aug 2024

- Led production of hot-pressed resinoid grinding wheels, achieving a 75% increase in output through process optimisation and TPM-driven improvement projects.
- Secured multimillion-rupee CAPEX approvals by preparing comprehensive technical reports and business cases for senior management.
- Commissioned multiple CAPEX projects collaborating with cross-functional teams and vendors; built automated Power BI dashboards for 3 manufacturing units.

INTERNATIONAL PROGRAMS

Erasmus+ Blended Intensive Programme (BIP) | *Hochschule Kaiserslautern, Germany* — May 2025

- Completed "Decarbonisation Strategies in Process Engineering" — online collaboration phase followed by 1-week physical mobility with students from University of Padova, University of Valladolid, UPC Barcelona, and University of Turku.
- Designed and simulated an MVR distillation column for ethanol purification using Aspen Plus; presented results and attended a Sulzer technical lecture; visited BASF Ludwigshafen Verbund site.

INTERNSHIPS AND PROJECTS

IBPE Plant Conceptual Design and Simulation | *University of Padova – M.Sc. Process Design Project* — Sep 2025 – Feb 2026

- Collaborated in a team of 6 to conceptually design a 5,000 t/year IBPE production plant using Aspen Plus, following a hierarchical design approach — covering economic potential screening, CSTR simulation, sensitivity analysis to optimise conversion and purge composition, and design of a three-column vacuum distillation separation system achieving 99.9% molar purity.

Model Development for Boiler Efficiency | *CORI Rubbers Pvt. Ltd.* — Mar – Jul 2022

- Built an Excel model for boiler efficiency determination; performed HAZOP analysis and authored SOP for the softener plant.

TECHNICAL SKILLS

Expert: Aspen Plus, Power BI, Excel (Advanced), Microsoft Office Suite
Proficient: ANSYS Fluent, AutoCAD, Pro/II, MATLAB, Minitab, Excel VBA, Canva
Familiar: C, C++
Process Methods: HAZOP, Six Sigma, Design of Experiments, QFD, TPM, Sensitivity Analysis, Cash Flow and Profitability Analysis

LEADERSHIP AND AWARDS

- Star of the Quarter – FY24, Carborundum Universal Limited — May 2024
- Chairperson, IIChE Students' Chapter, SASTRA University — Aug 2021 – Aug 2022
- Paper Presentation Runner-Up, Manipal University — Nov 2021
- Designer, National Conference on Advances in Process Engineering — Jan – Mar 2021

LANGUAGES

English, Tamil (Read, Write, Speak) **Hindi** (Read, Write)