

Emmanuel Boyd

Chemical Engineer Intern

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SUMMARY

Passionate Chemical Engineering student with hands-on experience in advanced chemical processes. Successfully contributed to academic projects focused on enhancing the design and optimization of technologies used in volatile chemical contaminants removal. Solid foundation in heat transfer, mass transfer, and fluid mechanics reflects an understanding of applying these principles in real-world scenarios. Collaborative team player, adept at communicating technical details within multidisciplinary environments. Eager to leverage skills and fresh perspectives at Innovative Solutions Corp, making a meaningful impact through innovative research in nuclear technology and radiopharmaceutical production.

EDUCATION

Bachelor's Degree in Chemical Engineering

University of Washington 🎓 GPA: 3.8 📅 2026 📍 Seattle, WA

Coursework: Thermodynamics, Fluid Mechanics, Mass Transfer, Heat Transfer

TECHNICAL SKILLS

- **Modeling Software:** COMSOL, ANSYS, MATLAB
- **Programming Languages:** Python, C++, MATLAB
- **Data Analysis Tools:** Excel, Python, MATLAB
- **Engineering Design Tools:** AutoCAD, SolidWorks, Aspen Tech
- **Safety Standards:** ISO 9001, OSHA Regulations, ANSI Standards
- **Technical Writing Tools:** LaTeX, MS Word, Google Docs
- **Collaboration Platforms:** Microsoft Teams, Slack, Zoom
- **Project Management Tools:** Trello, Asana, Microsoft Project
- **Laboratory Equipment:** Chromatographs, Spectrophotometers, Incubators
- **Quality Assurance Tools:** SPC, FMEA, Six Sigma

SKILLS

- Chemical Engineering Design
- Data Analysis
- Team Collaboration
- Process Optimization
- Technical Documentation

EXPERIENCE

Chemical Engineering Intern

University Project 📅 January 2026 - Present 📍 Seattle, WA

Engage in extensive research on lab-scale off-gas treatment systems to enhance designs for advanced scrubbers. Collaborate with skilled peers to optimize evaporation processes vital for radioisotope production, aligning operations with safety standards. Contribute to drafting of process flow diagrams (PFDs) and piping & instrumentation diagrams (P&IDs), ensuring accuracy and compliance with industry regulations.

- Conducted research on advanced chemical scrubbers, improving contaminant removal efficiency.
- Collaborated with teams to assess radioisotope evaporation processes, boosting system performance.
- Developed P&IDs and PFDs that ensured operational adherence to safety guidelines.
- Analyzed project data which supported design enhancements and yielded actionable insights.
- Participated in safety trainings reinforcing protocol knowledge in hazardous environments.
- Documented SOP-compliant records of processes to aid future development and evaluations.

Research Assistant

Academic Research 📅 September 2025 - December 2025 📍 Seattle, WA

Supported multi-disciplinary research efforts in radionuclide capture methods. Focused on absorption and filtration processes designed to combat volatile emissions. Engaged with engineering and radiochemistry students to create cohesive presentations for various academic forums.

- Conducted experiments evaluating the efficacy of chemical mitigation practices, contributing valuable results.
- Developed comprehensive documentation detailing experimental methodologies and findings.
- Collaborated on presenting research at conferences, illustrating a strong grasp of chemical engineering concepts.
- Supported peer mentoring sessions, facilitating a supportive learning environment for underclassmen.
- Enhanced communication by preparing insightful presentations of research outcomes for faculty meetings.
- Contributed to an encouraging environment for students passionate about chemical engineering fields.

LEADERSHIP & AWARDS

- Dean's List, University of Washington (2025)
- First Place, Chemical Engineering Design Competition (2025)

CERTIFICATIONS

- OSHA Hazardous Materials Certification 📅 2025
- Fundamentals of Engineering (FE) Exam Preparation Course 📅 2026

PROFESSIONAL AFFILIATIONS

- Member, American Institute of Chemical Engineers (AIChE)
- Volunteer, University Engineering Outreach Program

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST