JOHN BIERSDORF

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SUMMARY

Nuclear engineer transitioning into a software engineer role upon completing a B.S. in Computer Science. Strong understanding of Boolean logic and logical operations, with extensive experience leading groups, planning, scheduling, and executing projects, and mentoring new hires. Over ten years of experience working with logic models, data, and statistics while creating risk models for the nuclear industry.

EDUCATIONAL BACKGROUND

- **Oregon State University** – Corvallis, OR **June 2022 – June 2024**
  B.S., Computer Science
  Relevant Courses: Intro to CS 1 & 2, Discrete Math, Data Structures, Comp. Architecture and Assembly Language
- **University of Idaho** – Idaho Falls, ID **January 2016 – May 2019**
  M.Engr., Mechanical Engineering
- **University of Minnesota** – Minneapolis, MN **September 2011 – May 2013**
  MBA, Finance & Operations
- **Purdue University** – West Lafayette, IN **September 2004 – May 2009**
  B.S., Nuclear Engineering

SKILLS

- **Technical Problem Solving**
  - Work on projects ranging from general risk assessment to novel nuclear designs and risk methodologies.
  - Worked on assessing risk to portable heat pipe nuclear reactor. Discovered design too volatile to implement.
  - Strong mathematical skills in algebra, calculus, probability, and statistics.
- **Understanding Logical Operations**
  - Utilize fault tree and event tree analysis to assess mechanical systems using logic gates and Boolean algebra.
  - Five years' experience teaching logical model development and probability courses to regulators.
  - Develop logic models for that require similar planning, analysis, and structural development to coding.
  - Utilize models to reduce maintenance cycles reducing outage costs by $700,000 per day.
- **Leadership**
  - Led project of seven to develop software and database to assess accidents and failures for regulators. Synthesized results and reported to industry. Team consisted of technical and non-technical staff.
  - Created and led research team that identified a problem within the nuclear industry and created a tool to easily assess risk and improve efficiency for the regulators and generate consistency and transparency for industry. Produced procedure for tool use, published research paper, and final tool to assess risk.
- **Teamwork**
  - Ability to understand the big picture, putting the group's needs over personal success.
  - History of maximizing cohesion, communication, participation, and buy in from all team members.

EXPERIENCE

TerraPower **April 2021 – Present**
Principle Probabilistic Risk Assessment (PRA) Engineer – Bellevue, WA

Idaho National Laboratory (INL) **June 2015 – April 2021**
Probabilistic Risk Assessment (PRA) Engineer – Idaho Falls, ID

Xcel Energy **Feb 2011 – May 2015**
Probabilistic Risk Assessment (PRA) Engineer – Minneapolis, MN

ASME/ANS Joint Committee on Nuclear Risk Management (JCNRM) **September 2014 – Present**

CERTIFICATION/SKILLS/SOFTWARE/LANGUAGES

- **Software/Languages** Microsoft 365, R, SAS, Matlab, Python, NumPy, Matplotlib, Pandas
- **Skills** Engineering, Statistics, Probability, Management, Leadership, Research, Process Improvement
- **Certifications** Certified EIT having passed the Fundamentals of Engineering (FE) Exam