Gaurav Anand

CHEMICAL ENGINEER & DATA SCIENTIST

PROFILE

I'm a passionate scientist and driven researcher hoping to make a mark in the world. Looking forward to connecting with you!

CONTACT

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- gauvand.com
- gauvand
- gauvand

PROFESSIONAL EXPERIENCE

NIH All Of Us Researcher

VIBRENT HEALTH & UVA DATA SCIENCE — Since October 2020

Organizing COVID-19 specific Common Data Elements based on algorithmic review process within All of Us. Evaluating COVID-19 data to determine overlap with existing flu data to generate valuable insights into transmission patterns. Generating models using data mining, clustering, and statistical testing by investigating COVID-19 and flu survey data.

Graduate Research Assistant

COMPUTATIONAL MEMORY LAB @ UNIVERSITY OF VIRGINIA — Since August 2020

Developing computational models to link brain signals to human behavior based on EEG data. Employing deep reinforcement learning models to enhance the predictive performance of Brain-Computer Interface (BCI) applications by decoding neural activity. Working in scrum teams to develop an efficient and useful product for our sponsor.

Computational Materials Researcher

DESHMUKH LAB @ VIRGINIA TECH, DEPT. OF CHEMICAL ENGINEERING — August 2018 - May 2020

Principal Investigator: Dr. Sanket Deshmukh

Led a research project on high performance clusters using software applications in Bash, Python, C/C++ and Fortran with a diverse team of undergraduate and graduate researchers. Developed a Bayesian probabilistic model to quantify uncertainty in molecular dynamics simulations through Markov-Chain Monte Carlo sampling.

Process Design Engineer

EASTMAN CHEMICAL COMPANY & VIRGINIA TECH — January 2020 - May 2020

Designed a fermentation process producing 200 million pounds of 99.5% isobutanol per operating year with an annual product revenue of $99 million and rate of return of 10.8%. Evaluated plant safety using Hazard and Operability study (HAZOP) and Failure Mode and Effects Analysis (FMEA).

Energy Opportunities Subcommittee Member

VIRGINIA TECH CLIMATE ACTION COMMITMENT (CAC) WORKING GROUP — January 2020 - May 2020

Reworked the 2009 CAC which sets the university's long term goals towards reducing its energy footprint and improving sustainability both on and around campus. Reviewed progress and potential for energy systems improvement, including efficiency improvements and demand reductions for the steam plant, distribution, and electricity systems. Collaborated with Virginia Tech administration to conduct energy, financial, and greenhouse gas assessment of approved energy system scenarios.

EDUCATION

M.S. in Data Science

UNIVERSITY OF VIRGINIA - GPA: 3.92 — June 2020 - May 2021

B.S. in Chemical Engineering

VIRGINIA TECH — August 2016 - May 2020

LANGUAGES

- English
- Hindi
- French
- Kannada
- Malayalam

TECHNICAL SKILLS

- C/C++, Python > PyTorch, scikit-learn, PyMC3, pandas
- R, RMarkdown, RShiny
- SQL, NoSQL/MongoDB
- Unix > Shell scripts, HPC scheduler interaction