# GURPREET **SINGH**

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https://gur-p-reet.github.io/portfolio/
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## TECHNICAL SKILLS

**Data Analysis and Visualization:** Power BI, MS Excel, Oracle SQL Developer, Snowflake, SSMS, Tableau
**Programming Languages:** SQL, Python, Java, JOGL, HTML, CSS, JavaScript, Fortran, LaTeX
**Frameworks/Libraries:** Pandas, Scikit-Learn, NumPy, Matplotlib, Seaborn, ReactJS, ExpressJS, Node.js, NPM, Tensorflow

## EDUCATION

**M. Sc.** (Computer Science)– University of Northern British Columbia — Prince George, BC | Sept 2016-April 2019
**Ph. D.** (Physics)– Panjab University — Chandigarh, India | July 2010-Nov 2015

## WORK EXPERIENCE

### Business Analyst | ZE Power Group Inc. | Richmond, BC | June 2022-Present

- Played an active role in the seamless data flow from ZEMA application to downstream systems by executing data extraction, data cleansing, and creating, updating, and modifying SQL scripts.
- Led comprehensive analysis before client onboarding, meticulously validating data accuracy, consistency, and adherence to required formats. Rigorously examined the data sources, ensuring precision, and guaranteed that clients' transition to the live environment was smooth, successful, and backed by high-quality data.
- Developed Python scripts to automate manual analysis tasks, significantly reducing weeks' workload to a few hours.
- Took charge of in-depth analysis, resolving intricate curve reconciliation tasks in the upgraded ZEMA version. Scrutinized multiple reports, identifying and resolving data discrepancies for a seamless transition for clients.
- Leveraged an impressive array of tools including Power BI, MS Excel, Python, REST API, and Oracle SQL Developer to perform comprehensive data analysis, identify emerging trends, create reports, and drive informed business decision-making.

### IT Support Analyst | ZE Power Group Inc. | Richmond, BC | April 2021-May 2022

- Managed Active Directory administration, MS Exchange, and resolved various end-user issues.
- Supported multiple administrative portals, including Office 365, JIRA, and other data solution tools.
- Maintained accurate and timely reports to ensure compliance with inventory requirements.

### Teaching Assistant | University of Northern British Columbia| Prince George, BC | Sept 2016-Dec 2018

- Instructed and assessed students to meet course objectives and enhance learning outcomes.
- Provided project guidance and motivation, ensuring timely assignment completion.
- Actively engaged in professional development activities and collaborated with instructors and staff.

### Research Assistant | Raman Spectroscopy Laboratory, Panjab University| Chandigarh, India | July 2010-June 2015

- Conducted experiments using various sophisticated scientific instruments, cleaned and structured the data using tools such as MS Excel, Spekwin, Linux-Vim, etc., and ensured the accuracy and reliability of the data for analysis.
- Optimized Quantum Chemical Model predictions through hyperparameter tuning, enhancing the accuracy and efficiency of computational simulations.
- Applied advanced statistical techniques and tools to analyze patterns, correlations, and evaluation metrics, extracting meaningful insights from complex datasets.

### Research Assistant | Cyclotron Laboratory, Panjab University | Chandigarh, India | Aug 2008-June 2010

- Collected and cleaned data from heavy-ion fusion experiments at IUAC, New Delhi, India.
- Evaluated experimental data and compared results with model predictions (statistical and dynamical models).

## MAJOR PROJECTS

### Employee Attrition- Data Analysis and ML Modelling

- Performed data cleaning, transformation, analysis using different Python libraries on employee attrition data.
- Built models based on RandomForestClassifier, Logistic regression and Tensorflow and summarized results.

### Dog breed Identification- Data Analysis and ML Modelling

- Performed data transformation and model prediction using deep learning API (Keras- mobilenet_v2).
- Trained the model on more than 10,000 images. Made predictions for test data via calculating prediction probabilities

### Protein Structure Optimizer-Java Application

- Created an interactive user interface using Java and JOGL with multiple input/ output/analysis options.
- Implemented meta-heuristic optimization algorithms and on-demand hybridization among algorithms.

## RESEARCH PUBLICATIONS

**Presented research work in various conferences, workshops, and symposia, and contributed six publications in scientific journals.**