# Shuai Wang

**Address:** Ottawa, Ontario K2J 0M4 | **Mobile:** +1(343)-988-3810 | **Email:** shuaisdu@gmail.com

## Professional Summary

**Results-driven Senior Data Engineer** with over **5 years of experience** in designing, developing, and maintaining **scalable ETL/ELT pipelines** and robust data platforms. Adept at **modelling and transforming data for analytics**, supporting **BI and AI workloads**, and delivering **end-to-end data solutions** across **cloud-native platforms** such as **Snowflake, Redshift, and AWS Glue**. Proficient in **advanced SQL**, **Apache Spark**, **Pandas**, and **dbt**, with a strong focus on **BI tool integration** including **Power BI** and **IBM Cognos**. Passionate about enabling analytics and improving data accessibility through **semantic layer modelling**, workflow orchestration, and **collaborative cross-functional work**.

## Skills

- **Programming Languages:** Python, SQL, Bash scripting
- **Data Engineering & ETL:** dbt, Apache Spark, IBM DataStage
- **Cloud & Data Platforms:** AWS (Redshift, S3, Glue), Snowflake
- **Data Modeling & Governance:** Dimensional modeling, star/snowflake schema, metadata frameworks
- **Workflow & Orchestration:** Airflow, Jenkins CI/CD
- **BI & Visualization Tools:** Power BI, IBM Cognos Analytics, Tableau
- **Database Management:** MySQL, DBeaver, MongoDB
- **Development Methodologies:** Agile, Jira, DataOps, DevOps, Test-Driven Development (TDD)

## Work Experience

**IT Developer – Senior Data Engineer**
Canada Revenue Agency | *Ottawa, Canada | Jan 2023 – Apr 2025*

- Designed and maintained **high-quality ETL/ELT pipelines** using **Snowflake, dbt, Python, SQL and AWS Glue**, integrating multiple source systems and reducing processing time by 25%.
- Built **semantic-layer-ready dimensional models** (fact/dimension tables with SCD handling), enabling standardized **metric definitions** and analytics use.
- Leveraged **Airflow** to orchestrate and monitor workflows, increasing pipeline reliability and observability.
- **Optimized complex SQL** queries by reducing joins, refactoring subqueries, and leveraging indexing strategies, resulting in a 40% improvement in query performance and data accessibility.
- Supported **BI workflows** by developing interactive **Power BI** and Cognos dashboards, enabling **self-service analytics** for business stakeholders.
- Led **root cause analysis** and resolved technical data issues, helping stakeholders identify underlying issues.
- Conducted **rigorous data validation checks and regression testing** to ensure accuracy, integrity, and reliability of data pipelines, improving overall data consistency by 15%.
- **Applied Agile methodology**, participating in **sprint planning, backlog grooming, and daily stand-ups**, ensuring iterative improvements and efficient feature releases.
- **Utilized Jira** to track and manage issues, backlog tasks, and sprint progress, improving team collaboration and efficiency.
- Collaborated cross-functionally to **analyze data requirements** and design ingestion patterns for new data sources.
- Conducted peer reviews for team members' code and report.

**Data Analyst**

Carleton University | Ottawa, Canada | *Jan 2017 – Dec 2022*

- Designed and implemented **automated data workflows using Power Automate and Python**, improving data processing efficiency by 20%.
- Created **Power BI reports** analyzing student exam records, identifying key performance trends and delivering actionable insights.
- Conducted **root cause analysis** for data discrepancies, ensuring data accuracy and system reliability.
- Developed **data quality checks and error-handling protocols**, improving data consistency across systems.
- Documented and tracked technical issues using **Jira**, enabling continuous improvement in data processes.
- **Worked within Agile and DataOps methodologies**, ensuring continuous improvement in data pipeline accuracy and efficiency.

**Project Manager**

Shanghai Longcheer Technology Co. Ltd., | Shanghai, China | *Mar 2010 – Aug 2016*

- Led **the end -to-end delivery of smartphone projects**, managing hardware design, software design, and delivery.
- **Managed Agile product development cycles**, aligning teams with changing customer requirements and ensuring **on-time feature delivery**.
- Developed and maintained the **project plan and Work Breakdown Structure (WBS)**, identifying and prioritizing key project risks to ensure on-time and efficient delivery.
- Monitored **project status and performance**, addressing plan deviations, managing stakeholder change requests, and coordinating evaluations at critical project milestones.
- **Coordinated cross-functional teams** of engineers, designers, and QA testers, optimizing **team efficiency and communication**.
- Provided **weekly and on-demand reports** to customer managers, highlighting project progress, identifying risks to critical paths, and proposing solutions.

**Software Engineer**

Quanta Computer Inc., | Shanghai, China | *Jul 2007 – Mar 2010*

- Developed **customized Windows XP, and Win7 OS images**, tailoring system configurations to meet specifications.
- **Managed bug lifecycle**, from identification and analysis to resolution, ensuring stable OS performance.
- **Conducted functional, GUI, system, and regression testing**, optimizing OS stability and usability.
- **Collaborated with hardware and software teams** to enhance system compatibility with various devices.
- **Automated software installation and deployment processes**, reducing setup time and improving efficiency.

## Education

| | | | |
|---|---|---|---|
| **Master of Engineering** | \| Carleton University | \| Ottawa, Canada | \| *Sep 2016 – Apr 2018* |
| **Bachelor of Physics** | \| Shandong University | \| Jinan, China | \| *Sep 2003 – Jun 2007* |
| **Computer Programming** | \| Algonquin College | \| Ottawa, Canada | \| *Jan 2022 – Dec 2023* |

## Certifications

- **Microsoft Certified: Fabric Data Engineer Associate**
- **AWS Certificated Data Engineer – Associate**
- **Microsoft Certified: Power BI Data Analyst Associate**
- **Fundamentals of Agile Project Management**