Haojie **Ni**

Software Engineer

Essen, Germany

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Introduction

Python-focused Software Engineer specializing in building reliable and maintainable platform solutions. I translate business requirements into measurable deliverables—Python/SQL pipelines, KPI dashboards, and support automation that reduce manual effort. My research background provides a strong foundation in analytical and statistical thinking.

Skills

Programming	**Python, SQL, Bash**
Data & Analytics	**BigQuery, QlikSense (dashboards), Pandas, NumPy**
DevOps & Platform	**Airflow, Jenkins, Terraform, Linux, Docker, CI/CD, GCP, Git**
Backend & Testing	**Django (web & REST APIs), Pytest, Requests**
Collaboration & Process	**Agile Scrum, Production Support, Incident Analysis, Code Review**
Languages	**English (fluent)**, German (basic, progressing)

Professional Experience

HSBC Technology China

Guangzhou, China

Senior Software Engineer

Mar. 2022 - Apr. 2025

- **Data & Platform Engineering**
  - Served as a technical and business contact for internal stakeholders, clarifying requirements and translating them into deliverables.
  - Implemented pipelines to extract, transform, and load data in both real-time streaming and batch modes.
  - Refactored Python and Bash data pipelines to lower dependency complexity and resource usage.
  - Optimized SQL logic and partition strategies to reduce BigQuery cost.
  - Modeled insurance-domain data using a Medallion (Bronze / Silver / Gold) layering approach to standardize transformation flows.
  - Built QlikSense dashboards exposing operational and business KPIs to users.
- **DevOps & Production Support**
  - Resolved production support tickets (triage, root cause analysis, sustainable fixes).
  - Implemented infrastructure as code with Terraform and automated change workflows in Jenkins (CI/CD pipelines).
  - Managed Linux and Python runtime dependencies, resolving conflicts and ensuring stable environments.
  - Authored runbooks and health checks to accelerate incident diagnosis and reduce repetitive manual steps.
  - Participated in Agile Scrum ceremonies (planning, stand-ups, retrospectives).
  - Mentored peers through code reviews, design discussions, and guidance on readability and reliability.
- **Innovation Projects**
  - Redesigned the release process with a config-driven Jinja2 packaging framework, eliminating environment-specific code duplication and reducing configuration errors
  - Developed a unified PyQt monitoring dashboard that aggregated data from a shared email mailbox and an internal ticketing portal, eliminating manual checks and enabling faster response to issues.
  - Built a Django self-service portal for contact data management, which streamlined the update workflow, shortened data correction turnaround time, and significantly reduced the manual workload for the IT support team.

Education and Research

University of Alberta | MSc in Physics

Edmonton, Canada

GPA: 3.3/4.0, thesis-based graduate program

Sep. 2019 - Sep. 2021

- **Research Project - ATLAS (Quantum Black Hole Search)**: Built Python data workflows (cleaning, visualization) and applied hypothesis-driven statistical validation; documented in master's thesis.
- **Scholarships**: Mitacs Globalink Graduate Fellowship; Teaching & Research Assistant Fellowship.

Chongqing University | BSc in Physics

Chongqing, China

GPA: 3.7/4.0

Sep. 2015 - Jul. 2019

- **Research Project - LHCb (Particle Mass Measurement)**: Applied feature engineering and BDT classification; investigated anomalies and contributed validated modeling to a peer-reviewed JHEP publication.
- **Scholarships**: National Scholarship; Outstanding Student Scholarship.