

Peng Wang

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[LinkedIn Profile](#) | [GitHub Profile](#)

PROFILE

Full-Stack AI Developer with 10+ years in data engineering and software development, fluent in modern web stacks (React, Vite, Tailwind) and AI-driven backends (Python, FastAPI). Currently pursuing AI graduate studies at Algonquin College and actively seeking the Winter 2026 AI Hub placement to apply LLM-first design, accessibility practices, and cloud deployment expertise.

Philosophy: **simplicity over complexity** — architect robust systems that maximize impact through clarity and elegance.

SUMMARY OF QUALIFICATIONS

Technical Skills

- **Frontend & Accessibility:** React, Vite, Tailwind CSS, component-driven architecture, responsive design
- **Backend & APIs:** Python, FastAPI, Django, Flask, Java, Spring Boot; REST API design; Postgres, MySQL; JSON/HTTP integrations
- **AI & LLM:** Groq, Google Gemini, OpenAI, scikit-learn; API integration; learning evaluation pipelines and retrieval-augmented generation
- **Cloud & DevOps:** AWS, Render, Docker, Kubernetes, CI/CD, Git, GitHub Actions, Linux administration, Terraform (IaC)
- **Data & Observability:** Spark, Hadoop, CDH, DolphinScheduler, Airflow, ELK, data quality automation, real-time monitoring dashboards
- **Collaboration:** Scrum/Agile facilitation, stakeholder communication, bilingual (English/Mandarin), mentorship and code reviews

EDUCATION

Ontario College Graduate Certificate 2025 – 2026
Algonquin College, Ottawa, ON
Artificial Intelligence Software Development

Bachelor of Engineering in Communication Engineering 2008 – 2012
Hubei University of Technology, Wuhan, China

ACADEMIC PROJECTS

Ottawa GenAI Research Assistant Sep 2025 - Present
Collaborative Government Project | [GitHub Repository](#)

- Led enterprise-grade AI research assistant with bilingual support (EN/FR) for Ottawa Economic Development, adhering to accessibility standards

- Engineered FastAPI backend with 88.8% test coverage, integrating Groq AI and Google Gemini for retrieval-augmented generation
- Deployed microservices on Render with CI/CD, OAuth 2.0 authentication, GitOps workflows, and observability dashboards

Multi-Course Learning & Exam System Sep 2025 - Present
Independent Development Project | [Live Demo](#) | [GitHub Repository](#)

- Built a full-stack learning platform using React, Vite, Tailwind CSS, and component libraries, supporting learning, practice, lab, and exam modules
- Integrated AI-powered content generation via Google Gemini API to auto-generate materials from PDFs
- Launched admin dashboard with role-based access control on GitHub Pages, implementing accessibility auditing scripts and Lighthouse automation

Python Data Basics Learning Platform Sep 2025 - Present
Educational Project | [Live Demo](#) | [GitHub Repository](#)

- Built Python data processing platform with NumPy, Pandas, and Matplotlib, exposing REST endpoints for lesson metrics
- Created interactive learning modules with MDX and Monaco Editor for real-time code execution and component-based content reuse
- Designed comparison-based learning approach demonstrating data analysis workflow; containerized deployment on AWS Lightsail with Git-based releases

WORK EXPERIENCE

Data Architect Apr 2015 - Oct 2023
Guangzhou Huanwang Technology Co., Ltd., Guangzhou, China

- Architected big data platform processing 50+ TB monthly with 38 data sources, ensuring 99.9% uptime using Spark, CDH, and DolphinScheduler
- Coordinated cross-functional agile teams using Scrum to deliver 21+ concurrent projects on time and within budget
- Cultivated technical teams from 5 to 20+ members, providing mentorship and conducting code reviews

Java Developer Oct 2012 - Mar 2015
Beijing Haitian Network Marketing Planning Co., Ltd., Beijing, China

- Delivered core modules for enterprise OA system serving 200+ internal users, improving query performance by 35% through SQL optimization
- Automated deployment pipelines and managed server infrastructure supporting MySQL and Oracle databases, reducing manual deployment time by 40%
- Collaborated in agile Scrum teams to deliver high-quality code through pair programming and code reviews