

GEORGE SMITH

Applied AI Engineer • Senior Data Scientist

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PROFESSIONAL SUMMARY

Applied AI Engineer and Senior Data Scientist with 15+ years of experience developing machine learning solutions, predictive analytics, and intelligent decision-support systems across education, SaaS, and digital learning environments. Architect of the NorthStar AI Learning Intelligence Platform, an end-to-end Applied AI ecosystem integrating machine learning, retrieval-augmented generation (RAG), executive business intelligence, intelligent automation, and MLOps into a scalable, modular architecture. Experienced in designing production-oriented AI solutions that combine predictive modelling, natural language processing, analytics engineering, and modern software development practices to solve complex business problems. Combines hands-on technical expertise with strong product thinking to transform data into deployable AI applications that deliver measurable operational value.

FLAGSHIP AI PLATFORM

NorthStar AI Learning Intelligence Platform

A modular Applied AI platform integrating predictive analytics, retrieval-augmented generation (RAG), executive business intelligence, intelligent automation, and MLOps into a unified decision-support ecosystem.

- Designed and developed an end-to-end Applied AI platform integrating predictive analytics, machine learning, learner segmentation, retrieval-augmented generation (RAG), executive business intelligence, and intelligent automation within a scalable, modular architecture.
- Built machine learning pipelines supporting learner risk prediction, behavioral segmentation, recommendation systems, and intervention planning using Python, Scikit-Learn, SQL, and analytics engineering best practices.
- Developed retrieval-augmented knowledge assistants using Python, LangChain, semantic search, vector retrieval, and large language models to provide contextual information retrieval and AI-assisted decision support.
- Implemented production-oriented MLOps workflows incorporating model evaluation, version control, reproducible development, deployment, monitoring, and continuous model improvement.
- Designed interactive executive dashboards that transform operational, behavioural, and predictive analytics into actionable business intelligence, enabling data-driven strategic planning and performance monitoring.
- Integrated predictive modelling, explainable AI, retrieval-augmented generation, executive reporting, and analytics engineering into a unified Applied AI platform designed to support scalable decision-making across the learner lifecycle.

PROFESSIONAL EXPERIENCE

Data Science Consultant | Wall Street English, Meten English | Mar 2021 – Jun 2025

- Designed NLP classification pipelines using Transformer-based models to analyze 5,000+ monthly support tickets, reducing manual analysis by 20+ hours weekly.
- Developed collaborative-filtering recommendation systems using Python, Scikit-Learn, and behavioral analytics, increasing average learner engagement by 15% during controlled A/B testing.
- Improved model precision and recall by approximately 12% through feature engineering, evaluation, and error analysis.

Data Science & Analytics Lead | Shixi International School / Suzhou International School | Oct 2018 – Mar 2021

- Built and validated machine learning models using Python, Scikit-Learn, XGBoost, and feature engineering techniques, achieving 88% predictive accuracy in identifying at-risk learners.
- Led development of a multilingual dataset containing 200,000+ sentence pairs, improving quality consistency from 85% to 99%.
- Improved recommendation-system precision by 12% through feature engineering and model refinement.

Lead Data Scientist & Analytics Program Manager | The English Center / Argosy University | Aug 2012 – Sep 2018

- Developed predictive machine learning models using supervised learning techniques and statistical analysis, contributing to a 7% reduction in failing grades through earlier learner intervention.
- Mentored 50+ candidates in analytics, statistical methods, and research design.
- Built classification models achieving 92% alignment with stakeholder evaluations.

Senior Data Product Manager & Analytics Lead (Concurrent Consulting Engagements) | Aug 2012 – Dec 2016

- Led the analytics-driven development of more than 20 adaptive learning products, applying experimentation frameworks, behavioral analytics, and performance measurement to improve learner retention by 25%.
- Designed experimentation frameworks that improved learner retention metrics by 25%.
- Reduced product iteration cycles by 40% through data-driven feedback and evaluation pipelines.

EDUCATION & PROFESSIONAL TRAINING

Ironhack | Data Science & Artificial Intelligence Program | **2026**

Final Assessment: **Exceeding Expectations**

California State University, East Bay | M.A. Teaching English to Speakers of Other Languages (TESOL) | **2014**

California State University, East Bay | B.A. English (Language & Discourse), Minor in Creative Writing | **2012**