

ALVIN NEWMAN-SAMUELS

AI & AUTOMATION | MICROSOFT POWER PLATFORM | DATA ENGINEER & ANALYST

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PROFESSIONAL PROFILE

AI, Data and Digital Solutions Professional with an MSc in Computer Science and a BSc in Software Engineering. Software Development, Data Engineering, Analytics, Machine Learning and Technology Support Experience.

Python, SQL, Power BI, APIs, Databases and Microsoft Technologies are all areas of expertise. A solid base in transforming complex requirements and datasets into practical digital solutions. Experience with Data Engineering, Predictive Analytics, Semantic Data Modelling, Full-Stack Development and Microsoft 365 Workflow Automation. Currently developing a portfolio of Generative AI, RAG, AI-agent and Power Platform solutions focused on Intelligent Automation, Knowledge Management and User-Centred Digital Services. Strong problem-solving and stakeholder communication skills. Interested in Responsible AI, GDPR, Information Governance, Accessibility and Secure Technology Delivery.

CORE TECHNICAL SKILLS

AI & Generative AI: Generative AI, AI Agents, Conversational AI, RAG, Prompt Engineering, NLP, Machine Learning, Deep Learning, Predictive Analytics, Responsible AI

Microsoft & Automation: Microsoft Power Platform, Power Automate, SharePoint, Microsoft Lists, Microsoft Forms, Power BI, Microsoft 365, Azure, Workflow Automation, API Integration

Data & Engineering: Python, SQL, Pandas, NumPy, ETL/ELT, Data Transformation, Data Modelling, Data Pipelines, MySQL, PostgreSQL, MongoDB, REST APIs

Software Development: Java, JavaScript, HTML/CSS, Django, React, Node.js, Git, Docker, Jupyter, Unit Testing, Application Security

Governance & Delivery: UK GDPR, Data Protection, Information Governance, Responsible AI, Data Security, Access Control, Auditability, User-Centred Design, Accessibility, WCAG, Requirements Analysis, Stakeholder Engagement, Agile Delivery

PROFESSIONAL EXPERIENCE

AI & AUTOMATION ENGINEER | Real People Solutions | Jul 2025 – Present

- Analyse business and user requirements to identify high value opportunities for AI, Automation and Digital Transformation.
- Design, Build and Enhance AI-Powered Conversational Agents using Microsoft Copilot Studio. This includes Topics, Prompts, Generative Responses and Escalation Pathways.
- Connect AI Agents to Trusted Organisational Data and Knowledge Sources using SharePoint, Dataverse, Microsoft 365, APIs and RAG Approaches.
- Develop Automated Workflows using Power Automate, APIs and Connectors to Streamline Processes, Trigger Actions and Reduce Manual Effort.
- Test and Evaluate AI Solutions for Accuracy, Functionality, Security, Grounding, Usability and Performance across Real-World and Edge-Case Scenarios.
- Monitor Agent Performance and User Feedback to Continuously Improve Prompts, Workflows, Knowledge Sources and Overall User Experience.
- Apply GDPR, Information Governance, Responsible AI, Security, Access Control, Human Oversight and Risk-Management Principles throughout the Solution Lifecycle.
- Deliver Accessible, User-Centred Solutions Collaboratively while Communicating Technical Concepts Clearly, Documenting Solutions and Supporting Agile Delivery from Discovery through Deployment and Improvement.

Data Analyst / Engineer | Lidl GB | Jan 2025 – Jun 2025

- Supported Data Analysis and Reporting Activities, Using Structured Data to Identify Trends and Support Operational Decision-Making.
- Applied Analytical and Problem-Solving Skills to Transform Information into Clear, Usable Insights.
- Worked Collaboratively in a Fast-Paced Operational Environment while Maintaining Accuracy, Consistency and Deadlines.

ICT4D Consultant (Software & Systems Support) | Catholic Relief Services | Jan 2023 – Dec 2024

- Supported Digital Systems and Technology-Enabled Business Processes within an Operational Environment.
- Investigated Application and System Issues, Identifying Root Causes and Implementing or Escalating Appropriate Solutions.
- Supported Data Processing, Validation and Optimisation Activities to Improve Reliability and Operational Efficiency.
- Worked with Technical and Non-Technical Colleagues to Understand Requirements, Explain Technical Issues and Support Adoption of Digital Solutions.
- Contributed to Documentation, Troubleshooting and Continuous Improvement of Technology-Enabled Processes.

IT Support Officer | ICAP at Columbia University | Jan 2022 – Dec 2022

- Provided Application and Systems Support, Troubleshooting Technical Issues and Assisting Users with Technology-Related Problems.
- Investigated Incidents Systematically, Communicated Solutions Clearly and Escalated Complex Issues where Appropriate.
- Supported Reliable Digital Services through User Assistance, Technical Diagnostics and Problem Resolution.

SELECTED AI, AUTOMATION & DIGITAL SOLUTIONS PROJECTS

- 1. AI Council Services Assistant – Microsoft Copilot Studio | Copilot Studio | Generative AI | Conversational AI | Power Automate**
 - Planned Conversational AI Agent for Common Council Service Enquiries. Utilized Structured Topics, Generative Responses, Fallback Handling and Human Escalation
 - Demonstrated Requirements Analysis, Conversational Design, Prompt Engineering, User Centred Interaction and Responsible AI Considerations.
 - Planned Integration with Approved Knowledge Sources and Power Automate Actions to Support Service Navigation and Controlled Task Execution.
- 2. Public-Sector Policy Knowledge Assistant – RAG | RAG | LLM | Embeddings | Semantic Search | SharePoint/Knowledge Sources**
 - Planned Retrieval-Augmented Assistant that Answers Questions from a Controlled Collection of Public-Sector Policies, Procedures and Guidance.
 - Designed to Ground Responses Against Trusted Sources, Provide Traceability and Handle Unsupported Questions Safely.
 - Planned Evaluation of Retrieval Quality, Response Relevance, Hallucination Risk and Human Review Requirements.
- 3. AI-Powered Council Service Automation Platform | Power Automate | APIs | Dataverse Concepts | AI Classification | Workflow Automation**
 - Planned Workflow that Classifies Incoming Service Requests, Validates Information, Creates Records, Triggers Automated Actions and Provides User Confirmation.

- Demonstrated Workflow Automation, API Integration, Structured Data Handling, Audit Trails and Exception Management.
 - Documented Solution Architecture, Process Logic, Security Considerations and Testing Outcomes.
4. **Responsible AI & Governance Framework for Public-Sector AI Agents | UK GDPR | DPIA | Responsible AI | Information Governance | Security**
- Planned Governance Framework covering AI Risk Assessment, Data Classification, DPIA Considerations, Access Controls, Human Oversight, Auditability and Escalation.
 - Produced Practical Governance Artefacts including a Risk Register, Data Flow Design, Control Checklist and Human Oversight Model.
 - Demonstrated Understanding of Responsible Deployment Rather Than Treating AI Development as a Purely Technical Exercise.
5. **AI Agent Performance, Evaluation & Accessibility Dashboard | Power BI | AI Evaluation | Monitoring | Accessibility | UX**
- Planned Monitoring Solution for Response Quality, Fallback Rate, Escalation Rate, Unanswered Questions, User Feedback and Topic Performance.
 - Utilized Power BI to Translate Agent Analytics into Actionable Monitoring and Continuous Improvement Insights.
 - Incorporated Accessibility and Inclusive Design Checks Informed by WCAG Principles and User-Centred Testing.

EXISTING DATA, AI & SOFTWARE PROJECTS

Integrated Health & Social Care Demand Intelligence Platform | Python | Power BI | Forecasting | Data Integration | Strategic Analytics

- Integrated Health, Deprivation and Adult Social Care Datasets to Generate Neighbourhood Level Intelligence for Strategic Planning.
- Built Forecasting and Capacity Models in Python and Developed Interactive Power BI Dashboards with GIS Visualisations.
- Translated Complex Analytical Findings into Clear Recommendations for Non-Technical Stakeholders, Supporting Evidence-Led Service Improvement.

Machine Learning-Based Financial Forecasting Using Multi-Asset Time Series Data – Postgraduate Major Project | Python | TensorFlow/Keras | CNN | LSTM | MLP | Random Forest

- Developed an Intraday Trading Pipeline Using Historical Time Series Data Across Multiple Asset Classes and Timeframes.
- Compared Machine Learning and Deep Learning Approaches to Predict Price Direction and Evaluated Models Using Performance and Trading Metrics including Sharpe Ratio, Sortino Ratio, Maximum Drawdown and Win Rate.

Football Semantic Ontology & Natural Language Search | Protégé | Apache Fuseki | Python | NLP | Semantic Data

- Developed a Semantic Data Ontology for Football Using Protégé and Fuseki, with Python-Based Natural Language Processing.
- Designed Structured Knowledge Representation Intended to Support Semantic Querying and Web Search Use Cases.

Together Culture Full-Stack Web Application | Python | Django | MySQL | JavaScript | Authentication

- Developed a Responsive Web Application Supporting Account Creation and Dashboard Management for Approved Members.

- Implemented Secure User Authentication, Email Authentication and Verification, Database Backed Functionality and Subscription Related Features.

EDUCATION

- MSc Computer Science | Anglia Ruskin University | Jan 2025 – May 2026
- BSc Software Engineering with Multimedia | Limkokwing University of Technology | Sep 2016 – Feb 2022
- B.A. History and Sociology | Fourah Bay College, University of Sierra Leone | 2012 – 2016

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- Microsoft Server Management & Security | Coursera, University of Colorado
- Enterprise System Management & Security | Coursera, University of Colorado
- System Administration & IT Infrastructure Services | Google / Coursera

LANGUAGES & ADDITIONAL

- English – Native