Analysis of Internship Experience at Bradford Children's and Families Trust

# Introduction:

This report provides an analysis of my internship experience at the Bradford Children's and Families Trust (BCFT), a local authority-based organisation dedicated to the welfare of children and families. My primary objectives were to understand workplace dynamics, enhance my task management skills, and expand my knowledge of artificial intelligence (AI). This internship aimed to support my academic growth by demonstrating my ability to research and develop AI solutions for practical business challenges, while also gaining professional experience to establish my competence in a professional setting. Through this report, I will examine the various aspects of my internship at the Bradford Children's and Families Trust, illustrating the skills acquired and the contributions made towards leveraging AI for the organisation's benefit.

# AI Research

During my tenure at BCFT, I deepened my understanding of AI research methodologies and processes. I faced various challenges but engaged in insightful discussions with experts from diverse fields within the organisation. I was guided to numerous reputable resources, which proved invaluable for researching & developing potential AI solutions.

# The Organisation

BCFT is committed to the well-being of children and families in the Bradford District and collaborates with the Bradford Metropolitan District Council to improve children’s services. The trust envisions a [supportive and child-friendly city where every child can thrive](https://www.bradfordcft.org.uk/about-us/who-we-are/). Throughout my internship, I benefited from mentorship and regular meetings, which facilitated a comprehensive understanding of the organisation’s operations and system dynamics. The inclusive and supportive environment significantly contributed to my personal and professional development. Throughout engagements with various trust members, discussions revolved around the challenges they face and the potential for developing AI solutions to assist in their work.

# LCS and EHM

The LCS (LiquidLogic Children's System) and EHM (Early Help Management) are integral systems in child welfare management. LCS, initially developed and later adapted into EHM, features interconnected systems accessible interchangeably. These systems involve managing various forms and processes that could benefit from AI automation, particularly in extracting information from free text data. EHM handles initial contacts and maintains case details, while LCS, which receives most cases from EHM, offers expanded functionalities and additional features. Cases can be transferred between these systems as needed.

# IFD and CA

The Integrated Front Door (IFD) serves as the entry point for EHM, handling initial contact details and administrative tasks. Contact Assistants (CAs) manage information from various sources and complete necessary forms, with a focus on reviewing and assigning cases to social workers. CAs do not conduct family information checks, which are typically handled by social workers or practice workers.

# Children in Care & Care Leavers

BCFT oversees approximately 1,600 individuals, including children in care (CIC) and care leavers. CICs, ranging from 0 to 18 years old, are removed from their birth families due to various risks, while care leavers, aged 18 to 25, continue to receive support for higher education and life transitions. The organisation conducts regular visits and maintains detailed records, with supervision conducted monthly or quarterly. Efforts are underway to improve documentation and reflection during supervision meetings, with the possibility for AI improvements being considered.

# PMO, BA (Business Analyst) and Programme Data Manager

Within the Project Management Office (PMO), the Business Analyst (BA) is tasked with defining high-level requirements and refining business processes. This role involves a thorough understanding of business problems and operational workflows, leading to the creation of Software Requirements Specifications (SRS) that address both functional and non-functional aspects. The BA's responsibilities include driving business change, process improvement, or system replacement, with opportunities to explore AI solutions present here. Although the BA does not heavily utilize technical tools, Visio is employed for creating process diagrams, including Business Process Model and Notation (BPMN), and use cases are applied for business process documentation. User stories are also utilized to describe business processes and functions, forming the foundation for comprehensive documentation of requirements.

The PMO collaborates closely with the BA to secure approvals for proposed changes and improvements. It is responsible for planning, executing, and managing projects, ensuring compliance with procedures, and overseeing project closure. The PMO also plays a key role in organisational communication, providing updates, managing change notifications, and conducting follow-up activities to monitor project execution and address any emerging issues.

The Programme Data Manager conducts comprehensive data analysis, covering corporate, financial, and external datasets. Despite the abundance of data, the organisation faces challenges with data processing due to its fragmented nature and limited tool utilization. Power BI is used to create data visualizations for managerial decision-making. AI presents significant potential to enhance data processing and intelligence. The teams, established in January, are adapting to new systems, with Jira and Power BI integrated for agile project management and dashboard creation. A new system, PM3, is also in use, which, while similar to Jira, is less integrated with other systems. Insights from a case study in Derby, which demonstrated savings through AI in adult care packages, may provide relevant lessons for managing children's placements.

# Finance – SAP & ContrOCC

SAP serves as a payment recording system accessible across departments, focusing on invoice management without an approval process. ContrOCC, used for bulk payments in social and foster care, does not integrate with SAP but processes payments that originate in the LCS system. Although both SAP and ContrOCC are outdated, ContrOCC is slated for an upgrade to improve functionality and user interface.

In ContrOCC, Business Supporting Finance Officers (BSFOs) manage a range of services and contracts, with options to view deleted contracts. ContrOCC system managers are responsible for report generation, system maintenance, budget management, and monitoring payments. Unauthorized payments are flagged for authorization, and those that remain unapproved are deleted. The absence of AI-based enhancements in these systems highlights a potential area for development.

# BSO (Business Support Officer) roles in LCS

In child protection services, the process initiates with a strategy discussion followed by the Child and Family Assessment. Initial entries must be backdated if discussions occurred prior, as date modifications are restricted. Meeting details and attendees may be updated, though specifics such as duration and location are optional. The Chair must be assigned, and actions are confirmed via a pop-up notification. Strategy forms are generally not copied forward unless for follow-ups, and outcomes are recorded separately for each child. The social worker’s name and date must be included. The manager reviews and authorizes the Section 47 (S47) form, making the S47 pathway and single assessment accessible if not already opened. The child's perspective should be documented in blue text, and the S47 form is sent to the manager for approval.

Following the S47 and single assessment, the Child Protection (CP) Plan can be initiated. Meetings and notes must be documented, with the CP Plan marked as active on the child’s profile to allow task initiation. Core group meetings are required, updating the CP Plan without creating additional tasks. If a child transfers to another local authority, a transfer-out assessment is required, triggering a task for the Child Protection unit and scheduling a transfer-out meeting. Pre-meeting reports can be reassigned, and cases should close automatically, though manual closure is discouraged. All workers must be notified when a CP Plan ceases.

Received CP Plans from other local authorities are shown as external notifications and are non-editable. CP Plans should generally conclude within one year, with extensions beyond two years avoided. Cases often transition to a Child in Need (CIN) Plan, which requires manual initiation and updating by the social worker, as this transition is not automated.

In the Child Looked After (CLA) pathway, the process begins with recording the child's legal status, which releases a draft placement plan. Part 1 of the plan must be printed and provided to the child prior to placement. Long-term placement is usually not selected initially. To update placement details, users must access the relevant screen and input caution details and Emergency Duty Team (EDT) information. The "Make Placement Live" button must be clicked to activate new placements. Reviews occur at one month, three months, and then every six months, with the Personal Education Plan (PEP) initiated before the first review.

Care planning meetings are scheduled monthly or weekly for new cases and are recorded under events. Meeting location and time are manually entered. The decision section must be completed from a blank form and sent to the manager for review. Comments are made in green text, and the manager may review, reject, or approve the form. Current procedures require manual task completion, but future updates may automate this process. AI could improve the system by selecting appropriate meeting intervals.

In CLA episode management, the "Period of Care" section displays prior placements. A new placement plan can be created only if the current placement is concluding. Transitioning to a long-term placement involves selecting 'yes' for long-term status and noting the change of status reason. The new placement must be activated by clicking "Make Placement Live," and changes of carer must be managed through the relationships screen. Timely updates are critical to avoid payment errors. To end a placement, the "Leaving CLA" task must be initiated and completed. For Special Guardianship Orders (SGO), the order must be added with the child's 18th birthday date, and relationships must be updated. Timely updates are essential to maintain access to the SGO support plan. Unfinalized CLA reviews delay progression, requiring additional intervention.

# Data Intelligence and the Cherwell System

Current data analysis relies predominantly on spreadsheets, with limited use of Microsoft suite services such as SharePoint. To improve report updates and retrieval, Power BI and workflows are employed, utilizing SQL for data management. Developing video tutorials for SharePoint and other Microsoft 365 tools could enhance user awareness and resource accessibility.

Ticket resolution in the Cherwell System currently involves time-consuming manual processes. Implementing an AI chatbot could address minor queries efficiently and automate password resets for locked accounts. AI could also expedite data extraction from SharePoint forms, improving processing speed and employee efficiency. Fortunately, a replacement for the Cherwell system will be coming soon and the Trust’s architects and IT specialists are working on it, planning to include an AI chatbot in it as the first planned implementation of AI in the Trust.

**Challenges and Solutions in AI Implementation**

The Trust encounters several operational challenges that could potentially be mitigated through AI. These include the manual entry of forms in the EHM and LCS systems and the need for manual data input from phone calls and emails by the IFD and CA. The subsequent section will explore AI solutions to address these issues.

However, implementing AI introduces risks and challenges. Security concerns are paramount due to the sensitive nature of data, such as health reports and personal information. The extensive data usage required for AI model training raises significant security barriers. Additionally, the Trust has previously faced issues with third-party applications, such as Otter AI, which was discontinued due to its handling of sensitive information, posing a security risk within the Trust’s Microsoft subscription.

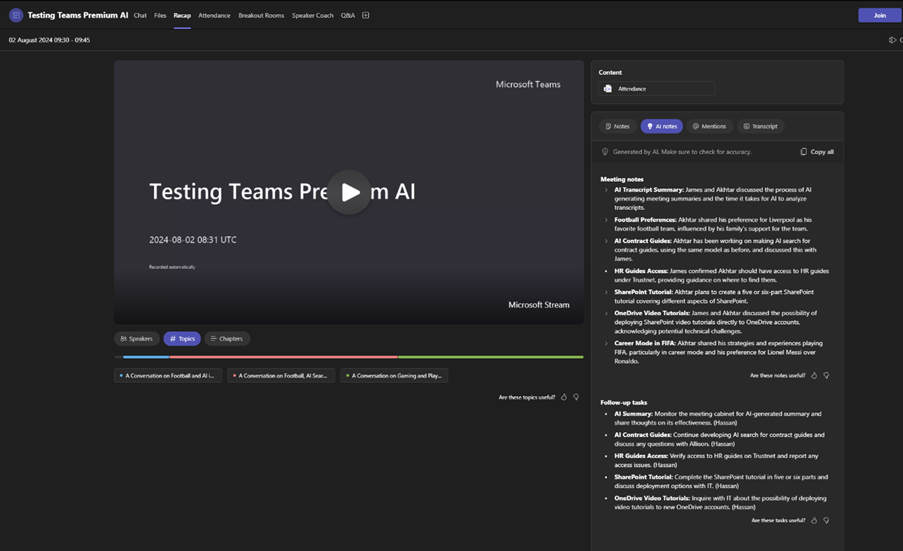
Scalability is another concern, as expanding AI solutions can be costly and time-consuming, potentially leading to negative outcomes if not executed properly. Financial constraints are also a factor; while AI could be cost-effective in the long term, the initial setup and subscription costs are substantial. Microsoft and other service providers charge significant fees, complicating the investment decision.

The reliance on services like Microsoft 365 presents both advantages and challenges. While these services facilitate daily operations, their cost and the difficulty of discontinuing them once dependencies are established pose issues. Concerns about the cost-effectiveness of Microsoft and AWS models also persist among architects and technicians within the Trust.

Addressing these challenges involves careful planning and consideration. AI technologies can automate repetitive tasks, enhancing productivity and reducing labour costs. In systems like LCS and EHM, AI applications could streamline tasks such as form completion and data extraction from communications. Implementing AI could include features like speech-to-text for phone calls, document intelligence for email summaries, and automated risk assessments for child referrals. Each AI application would be tailored to a different role and would only include the tools necessary for a worker in that role to improve their own productivity and no more or less.

Effective AI implementation requires navigating development and deployment challenges. In-house solutions offer efficiency but may involve extended testing periods. Alternatively, engaging specialists with expertise in AI could be beneficial, though this presents its own management challenges. A small, skilled team of AI developers could create solutions that incorporate necessary features, ensuring a gradual and manageable implementation process. Gradually rolling out this system, accompanied by sufficient training, can aid in worker adoption and ensure effective scalability. The focus should be on gradually mastering the previous challenges, thereby reducing the need for immediate utilization of multiple AI features. This transition allows for an assimilation period, enabling workers to automate tasks that can be and should be automated, improving efficiency and reducing backlog, when it comes to urgent tasks.

Utilizing existing tools and services, such as AI features in Microsoft Teams, can enhance operations and build trust in AI solutions. A case study demonstrated that Teams AI’s premium features could effectively summarize meetings, showcasing the potential benefits of AI. This emphasizes the importance of investing in AI to leverage its advantages, provided that the costs and integration challenges are effectively managed. Below is ***Figure 1*** showing the **AI notes** in **Teams.**



# Existing IT security measures and Developments

The organisation is currently enhancing its IT infrastructure by integrating an IT fundamentals toolkit, which will include comprehensive tutorials developed by the communications team led by Vincent Biglins. As part of the broader architectural strategy, the organisation is evaluating a new IT Service Management (ITSM) platform with capabilities for embedding AI-driven chatbots. These chatbots are being incorporated into the support ticketing system to streamline IT worker assistance. The organisation's architectural approach prioritizes a cloud-first, on-premise-second strategy, leveraging Azure cloud services to achieve cost savings. A key focus is on securing enterprise applications; previously, workers could bypass administrative oversight, but now all applications must undergo a thorough review and approval process. Endpoint devices are managed through Intune, transitioning from a corporately owned, personally enabled strategy to one where devices are fully controlled by IT, restricting end-users from independently downloading applications on work phones. Intune also facilitates the deployment of new software and enforces security protocols. Microsoft services provide robust administrative controls, critical for maintaining a security-centric posture. Recent cyber-attacks, such as the one that impacted Leicester for two weeks, underscore the importance of the organisation's multi-layered security platforms, which include an anti-malware layer that isolates compromised devices for further review. Additionally, due to legal concerns in the United States, Teams has been decoupled from the Office 365 (E3) license. The principle of least privilege (POLP) is strictly adhered to, ensuring that users are granted access only to the systems necessary for their roles. An AI policy is currently under development, with a particular focus on security, and there are plans to coordinate a meeting with Vikas Pethia to advance this initiative, potentially facilitated by James.

# Magic Notes Case Study

Magic Notes represents a significant advancement in technology for case management within social care. Traditionally, social care technology has been limited to conventional tools specific to individual teams. Beam, the developers behind Magic Notes, have been integrating large language models (LLMs) such as ChatGPT into their own applications. This effort culminated in the development of Magic Notes, which has demonstrated improved efficiency and effectiveness. Initial case studies revealed that incorporating LLMs significantly enhanced task timings and reduced the time required for various activities. Following these successful trials, the software was briefly tested with several small local agencies.

The software operates through three primary functionalities: recording meetings, transcribing them with speaker recognition, and generating customized summaries. It filters out background noise, offering greater accuracy than traditional transcription services like Microsoft Teams. Accessible as a web application, Magic Notes can be used on computers, laptops, and phones, primarily for recording and transcribing in-person meetings via work phones.

Magic Notes includes several key features. It should be activated at the beginning of meetings for optimal speaker recognition and provides both a Summary section and a Recording/Transcript section. After completing recordings, emails are sent to social workers with links to the finished transcripts. The software offers customizable reporting templates, auto-generates titles, and includes a text box for modifications. Version control allows users to save previous versions, and AI-generated content can be integrated into systems such as LiquidLogic. Social workers are advised to review the outputs, as the system is not infallible.

Technically, Magic Notes is compatible with various platforms, including Microsoft, Apple, Google, and Android devices. It supports in-person meetings, phone calls, and video calls on platforms like Teams and Zoom. Integration with databases such as The Access Group’s Mosaic (ContrOCC) and System C’s LiquidLogic is planned for after the pilot phase. The software uses a Human-in-the-Loop approach for data protection, ensuring that workers can confirm and edit transcriptions. No data is used to train models, and all data is stored and processed in the UK and EU, with a Data Protection Impact Assessment completed.

The implementation of Magic Notes will proceed in stages, starting with a smaller user group to generate enthusiasm. Training, designed by former social workers, will include hands-on and one-to-one sessions, with feedback actively collected and used to refine the process. Preliminary findings indicate that Magic Notes improves productivity by approximately 63%, particularly benefiting neurodivergent staff in notetaking. The strategy has been effective in building confidence and fostering cultural change, enabling frontline staff to concentrate more on support and other critical areas.