Artificial Intelligence and Digital Health in Social Work

Dr. Carl J. Sheperis, Vice Provost, Kutztown University

Introduction to AI in Social Work

- **DEFINITIONS**

  We will review the definitions of Artificial Intelligence (AI) and the role of AI in social work, including how it can enhance the delivery of social services and improve client outcomes.

- **IMPORTANCE OF AI**

  We will discuss the potential benefits of incorporating AI technology into social work practice, such as streamlining administrative tasks, improving data analysis and decision-making, and enhancing personalized client support.

- **OBJECTIVES OF THE PRESENTATION**

  We will cover the current applications of AI in social work, the future potential of AI-powered tools, and the ethical considerations surrounding the use of AI in social work.

- **FUTURE DIRECTIONS**

  We will explore the potential future advancements in AI technology and how they may be applied to enhance social work practice, such as predictive analytics, natural language processing for improved client communication, and the integration of AI-powered assistants to support social workers.

- **ETHICAL CONSIDERATIONS**

  We will discuss the ethical implications of using AI in social work, including concerns about data privacy, algorithmic bias, and the need to maintain human-centered decision-making processes that prioritize client well-being and social justice.

No Professional Discipline is Exempt from AI Exposure

Levels of AI Knowledge by Future Workforce Demand	Skills Needed	PCO Implication
~5% of knowledge-sector jobs will be **advanced level**	▶ **Large language model design**: building new GenAI models ▶ **API manipulation**: the use of application program interfaces to have AI models interact with one another	Training already exists in Computer Science department
~25% of knowledge-sector jobs will be **intermediate level**	▶ **Model fine-tuning ability**: Able to select and adjust the right models for the company ▶ **Cross-team collaboration**: Oversee integration into workstreams and employee training.	Option to provide additional coursework for students who want to become AI leaders in their field
~70% of knowledge-sector jobs will be **basic level**	▶ **AI Literacy**: Understanding GenAI's abilities and limitations as the technology evolves ▶ **Emotional Intelligence**: Human-to-human interaction to complement GenAI	Ensure all students have these skills; opportunity to provide training for field-specific uses

Current Applications and Tools

CLINICAL DECISION SUPPORT SYSTEMS

Analyze data to predict crises and recommend evidence-based interventions for child welfare, mental health, and crisis situations

PREDICTIVE ANALYTICS

Identify patterns to enable early intervention and prevention of issues before they escalate

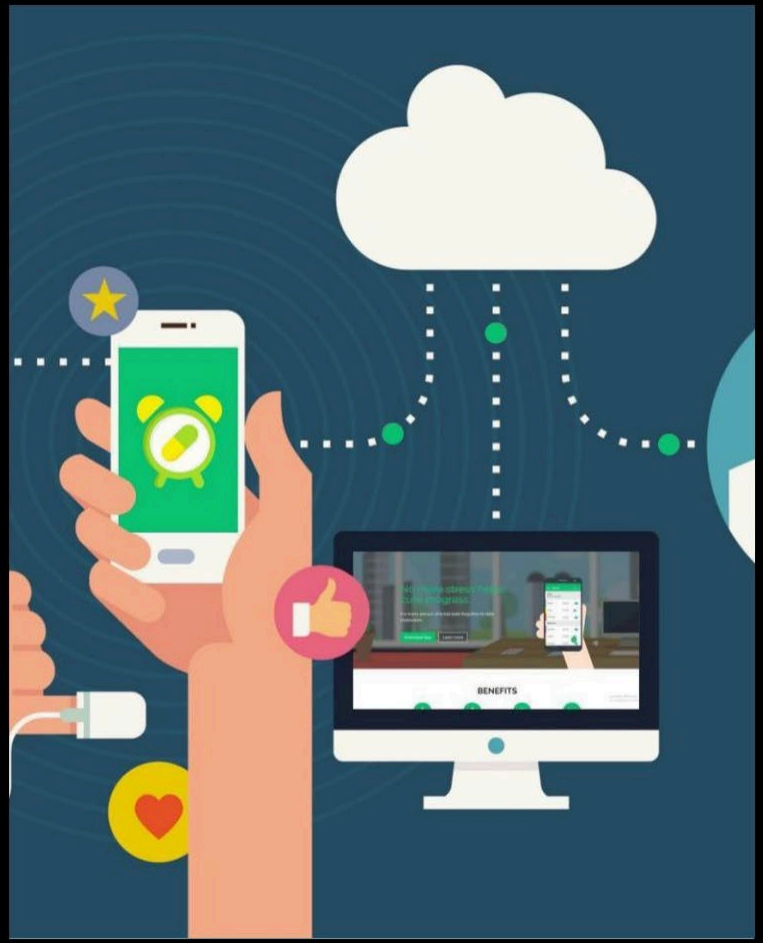
CASE MANAGEMENT AND RESOURCE ALLOCATION

Tools that streamline client tracking, documentation, and matching to available community services

THESE AI-POWERED TOOLS ARE TRANSFORMING SOCIAL WORK PRACTICE BY ENHANCING DECISION-MAKING, IMPROVING CLIENT OUTCOMES, AND OPTIMIZING SERVICE DELIVERY.

Digital Health Technologies

Telehealth platforms, mobile health apps, and electronic health records with AI-enhanced capabilities are enabling remote and data-driven social work. These digital health technologies are transforming how social workers assess and respond to client needs, offering new opportunities for improved service delivery and outcomes.



Administrative Tools

•NATURAL LANGUAGE PROCESSING

Automatically converts verbal notes into text, suggesting relevant clinical terminology to significantly reduce documentation time.

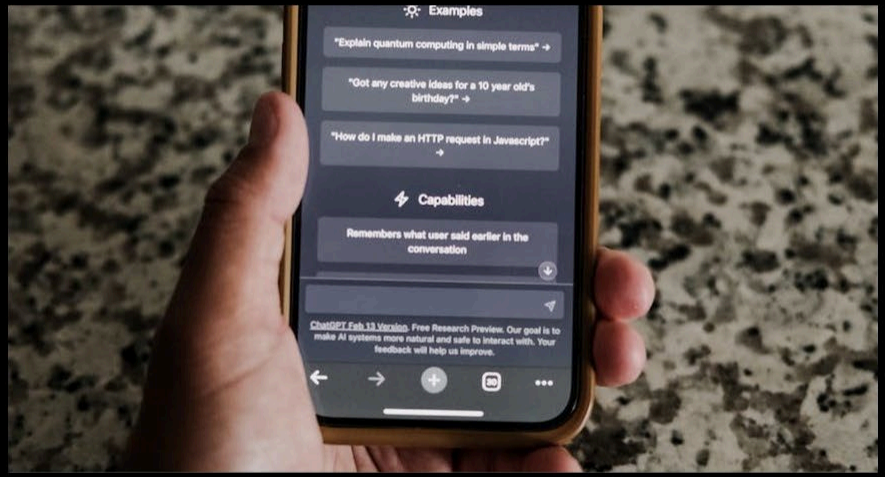
•AUTOMATED SCHEDULING SYSTEMS

Consider client preferences, urgency, and resource availability to optimize appointment scheduling, improving efficiency and access to services.

RESOURCE MATCHING ALGORITHMS

Analyze client needs against available community services, factoring in location, eligibility, and service capacity to provide personalized referrals.

Case Studies and Examples



DIVORCEIFY

B AI tool for legal and emotional navigation during divorce

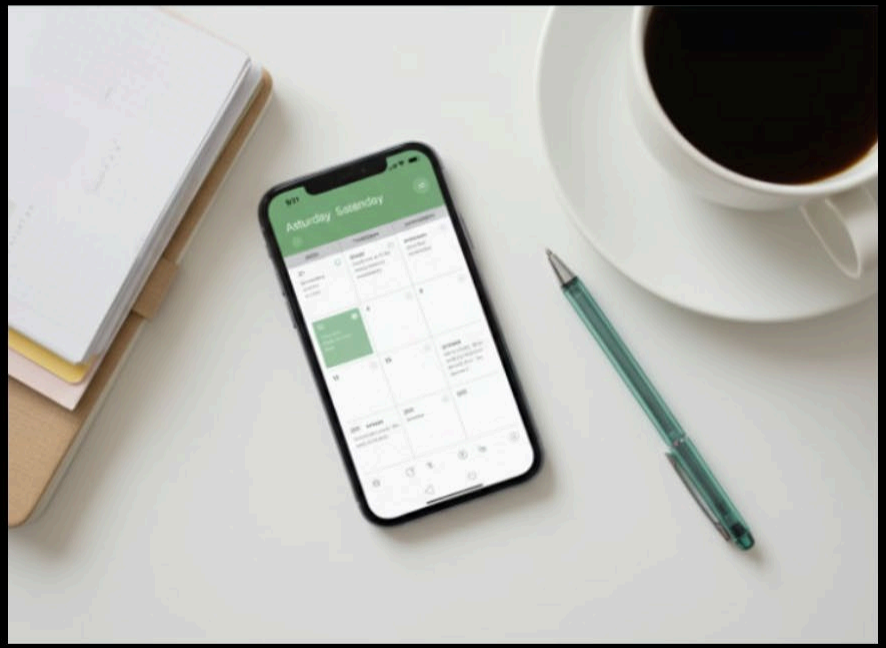
PARENTING CHATBOTS

AI-powered tools for behavior management and parenting support

Case Studies and Examples

OUR RITUAL; OURS

AI - powered tools to support weekly therapy with individual or couple.



AI AS COTHERAPIST

Scheduled sessions with therapists plus specific psychoeducational videos and exercises related to couple's needs between sessions

Ethical Considerations: Privacy and Data Security

CLIENT CONFIDENTIALITY IN DIGITAL PLATFORMS

Ensure HIPAA compliance and maintain client privacy when using telehealth, mobile apps, and other digital tools. Implement access controls and encryption to protect sensitive information.

DATA OWNERSHIP AND SHARING PROTOCOLS

Establish clear policies regarding data ownership, usage, and sharing between service providers. Obtain informed consent from clients and provide transparency on how their information will be used.

SECURE STORAGE AND TRANSMISSION

Implement robust security measures to safeguard client data, including end-to-end encryption, secure data centers, and rigorous access protocols. Regularly audit systems for potential vulnerabilities.

AUDITING AND MONITORING

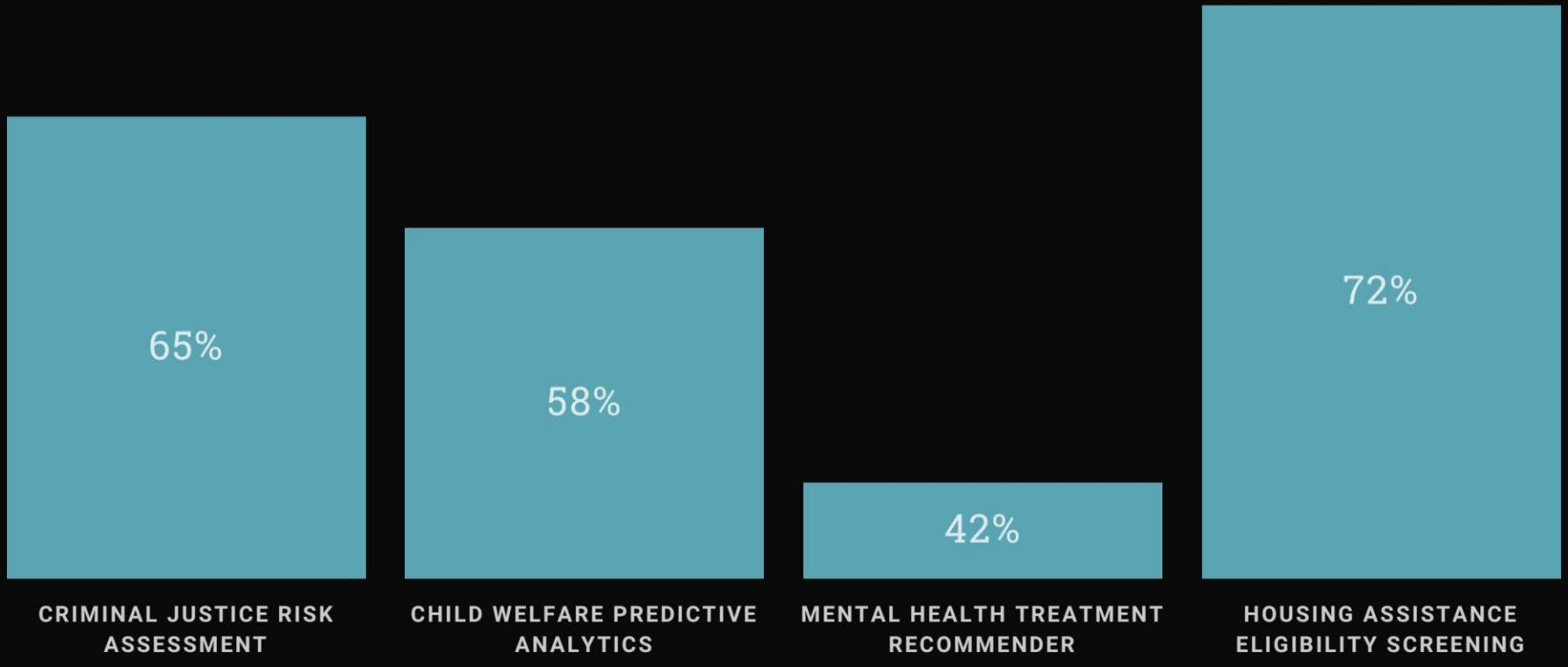
Continuously monitor digital systems for unauthorized access or data breaches. Establish auditing procedures to ensure compliance with privacy regulations and organizational policies.

CLIENT EDUCATION AND CONSENT

Educate clients on data privacy and security practices. Obtain ongoing consent for data collection, usage, and sharing as digital tools and policies evolve.

Ethical Considerations: Algorithmic Bias

Percentage of AI systems identified with significant bias against marginalized populations



Ethical Considerations: Informed Consent

Essential Digital Competencies

TECHNICAL SKILLS

Foundational understanding of AI/ML concepts, ability to navigate digital platforms, interpret data visualizations, and apply cybersecurity best practices. Recognize when AI tools are appropriate and when human judgment should take precedence.

PROFESSIONAL INTEGRATION

Effectively combine AI insights with clinical expertise, select appropriate digital assessment tools, document effectively in electronic systems, and maintain therapeutic relationships in remote service delivery.

ETHICAL APPLICATION

Understand AI limitations to prevent over-reliance, actively identify potential biases, implement robust privacy protection measures, and ensure informed consent procedures reflect technological complexity.

Future Developments

IMPROVED PREDICTIVE MODELING

Predictive models will offer increasingly accurate intervention outcome forecasting, enabling more targeted service delivery.

PERSONALIZED INTERVENTIONS

Recommendation systems will consider individual client characteristics, preferences, and past treatment responses to suggest personalized interventions.

SMART DOCUMENTATION

Documentation systems will learn from practitioner patterns to suggest relevant clinical observations.

VIRTUAL REALITY INTERVENTIONS

Virtual reality applications will offer immersive therapeutic environments for exposure therapy and skill practice.

REAL-TIME RISK ASSESSMENT

Emerging real-time risk assessment capabilities will allow immediate response to crisis situations.

AUTOMATED ASSESSMENTS

Future systems will automate routine assessments while preserving human judgment for complex decisions.

INTELLIGENT RESOURCE MATCHING

Advanced resource matching will consider subtle client needs and preferences when suggesting services.

EMOTION RECOGNITION

Emotion recognition systems will assist in assessing client states during virtual therapy sessions.

Implementation Considerations

Infrastructure Requirements	Staff Training Needs
Secure networks, hardware, and software systems	Technical skills, ethical considerations, and clinical integration
Reliable internet connectivity and security protocols	Ongoing training as technologies evolve, mentoring systems, and technical support

*AI and Digital Health in Social Work: Detailed Analysis

Dr Carl J. Sheperis

Connect with me on social media

www.kutztown.edu

linkedin.com/in/carlsheperis

sheperis@kutztown.edu