

AI-Powered Navigation for Enhanced Autism

23rd Annual Alabama Autism Conference

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Care in Alabama: Bridging the Resource Gap

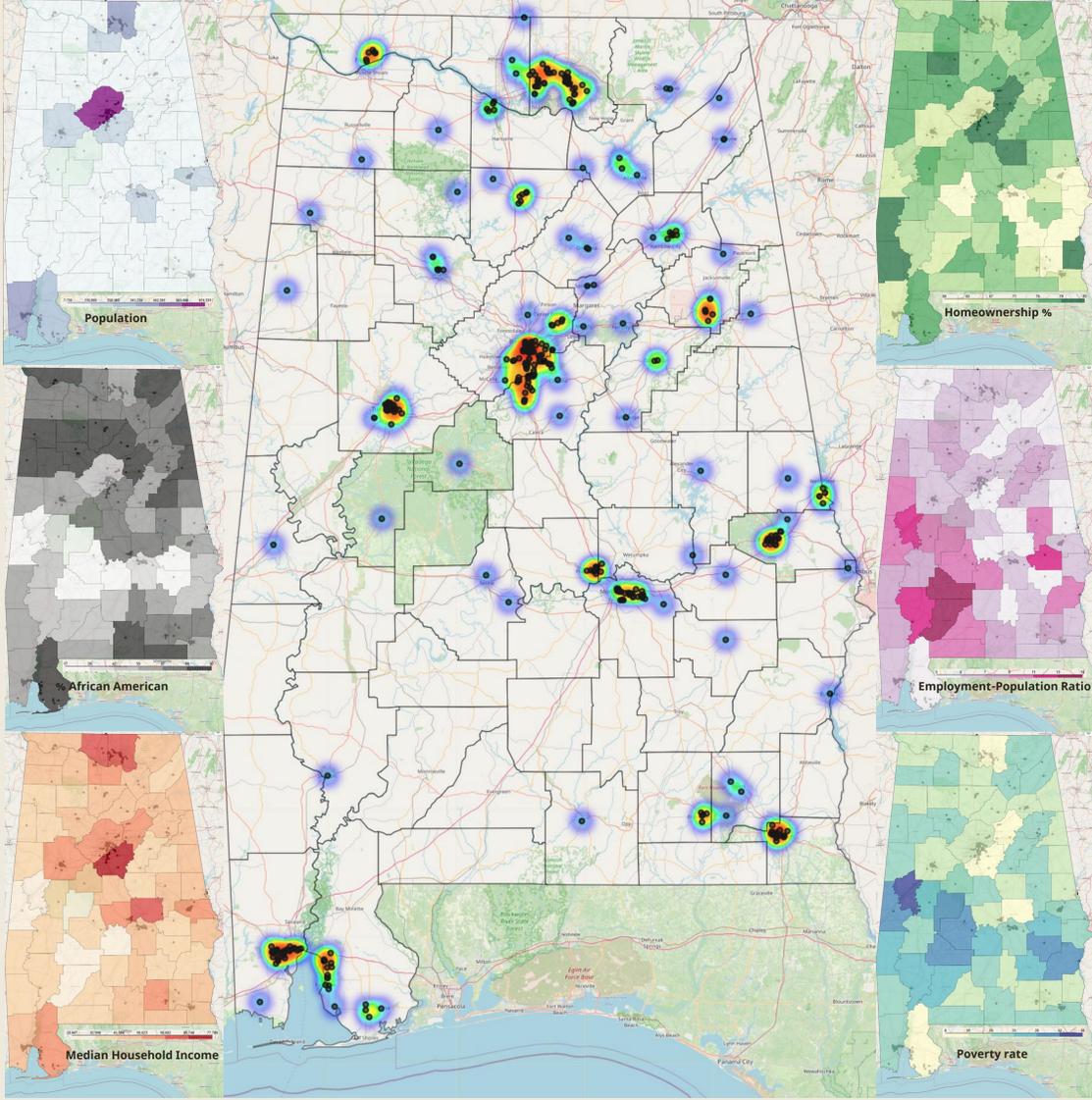
An AI-powered chatbot to enhance autism care in Alabama by providing social workers a tool to better serve clients. It is trained on real social worker-client conversations and integrated spatial and service-based topical graphs. It tries to serve as an assistant providing accurate information to connect individuals, caregivers, and professionals to appropriate services and support, with a focus on delivering structured facts and instructions related to navigating Alabama's complex autism system of care, and not medical or legal advice.

Early testing shows promise in streamlining information searches that previously required extensive social worker effort per client. The chatbot can understand common client questions and provide accurate information about autism services in Alabama. Ongoing work focuses on expanding its knowledge and conversation abilities towards the final goal of strengthening Alabama's autism care framework, ensuring individuals with autism receive needed support.

AFFILIATIONS

1. The University of Alabama in Huntsville, Department of Biological Science
2. Little Orange Fish
3. Autism Services - Alabama Department of Mental Health
4. The University of Alabama in Huntsville, Department of Psychology

Mapping autism resources in Alabama revealed Disparities



Mapping existing autism resources across Alabama's counties revealed **regional disparities** in access to coordinated care. These gaps are visualized by mapping additional socioeconomic factors, including:

- **Population**
- **% African American Population**
- **Median Household Income**
- **Poverty rate**
- **Employment-Population Ratio**
- **Homeownership %**

Closing gaps in autism services is an issue of **Diversity, Equity, and Inclusion (DEI)**. The AI Powered chatbot uses this analysis to guide users to accessible options when local care is insufficient or lacking.

Real Case Scenario: Social Worker-Client Email Exchange

Q: Do you know of providers for OT and Speech in Huntsville that accept Medicaid as insurance and serve 20-year-olds?

A: **More than Words Speech Therapy, Bailey Cove Speech Therapy, Huntsville Hospital Therapy & Sports Rehab, Encore Rehabilitation**

Athena

Autism Therapy and Healthcare Empowerment Navigator Assistant

Leveraging Natural Language Processing (NLP) and Algorithmic Search for Enhanced Care Support

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# Example user_query = "Do you know of providers in Huntsville for OT and Speech that accept Medicaid as insurance and serve 20-year-olds?" relevant_tags, query_tokens, location_terms = understand_query(user_query) results_df = find_service_providers_with_scoring_percentage(user_query, relevant_tags, query_tokens) formatted_results = format_results_with_scores_percentage(results_df) print(formatted_results) Provider Name: Encore Rehabilitation ✓ Provider Name: Parent Training Applied Behavior Analysis (ABA) After-school Programs Social Skills Provider Name: Ability Plus Provider Name: Alabama Artistic Center Provider Name: Alabama Department of Mental Health Provider Name: Alabama Department of Rehabilitation Services (ADRS) Provider Name: Alabama Medicaid Provider Name: Bailey Cove Speech Therapy ✓ Provider Name: Madison Behavior Therapy ✓ Provider Name: More than Words Speech Therapy ✓ Provider Name: Huntsville Hospital Therapy & Sports Rehab ✓
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Building upon the robust foundation of Athena's NLP and algorithmic search capabilities for enhanced care support, we have evolved our technology into Minerva, an advanced conversational chatbot using large language model tailored specifically to enrich autism support services.



Minerva

Modern Interface for Navigating Empowerment and Resource Visibility in Autism care

Advancing Autism Support with Conversational Large Language Models (LLM)