



Πρόγραμμα Μεταπτυχιακών Σπουδών Εξειδίκευσης του **Τμήματος Ελληνικής Φιλολογίας** του **Δημοκριτείου Πανεπιστημίου Θράκης** σε συνεργασία με το **ΕΚΕΦΕ Δημόκριτος – Ινστιτούτο Πληροφορικής και Επικοινωνιών** με τίτλο: «**Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της ένταξης**»

**Η ΤΕΧΝΗΤΗ ΝΟΗΜΟΣΥΝΗ ΩΣ ΥΠΟΣΤΗΡΙΚΤΙΚΟ ΕΡΓΑΛΕΙΟ ΣΤΗ
ΔΙΑΓΝΩΣΗ ΔΙΑΤΑΡΑΧΩΝ ΤΗΣ ΟΜΙΛΙΑΣ**
**ARTIFICIAL INTELLIGENCE AS A SUPPORTIVE TOOL IN THE DIAGNOSIS
OF SPEECH DISORDERS**

Της
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Μεταπτυχιακή διατριβή που υποβάλλεται στην τριμελή επιτροπή για την απόκτηση του μεταπτυχιακού τίτλου του Προγράμματος Μεταπτυχιακών Σπουδών Εξειδίκευσης του Τμήματος Ελληνικής Φιλολογίας του Δημοκριτείου Πανεπιστημίου Θράκης σε συνεργασία με το Ε.Κ.Ε.Φ.Ε. Δημόκριτος – Ινστιτούτο Πληροφορικής και Επικοινωνιών με τίτλο: «**Εξειδίκευση στις Τ.Π.Ε. και Ειδική Αγωγή – Ψυχοπαιδαγωγική της ένταξης**»

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Περίληψη

Οι Διαταραχές της Ομιλίας επηρεάζουν σημαντικά την επικοινωνία και την ποιότητα ζωής των ατόμων. Με την πρόοδο της τεχνολογίας, η Τεχνητή Νοημοσύνη εμφανίζεται ως ένας πολλά υποσχόμενος κλάδος για την έγκαιρη διάγνωση αυτών των διαταραχών, από την πρώιμη ήδη παιδική ηλικία, με στόχο την ενίσχυση της ακρίβειας και της αποτελεσματικότητας της διάγνωσης. Οι αλγόριθμοι Μηχανικής Μάθησης έχουν δείξει δυνατότητες στην ανάλυση της ομιλίας, αναγνωρίζοντας δυσδιάκριτα μοτίβα που μπορεί να διαφύγουν της ανθρώπινης παρατήρησης και να αυτοματοποιήσουν την ανάλυση της ομιλίας, ενισχύοντας την αντικειμενικότητα και την ταχύτητα της διάγνωσης.

Αυτή η εργασία διερευνά τις δυνατότητες της Τεχνητής Νοημοσύνης στη διάγνωση των διαταραχών ομιλίας, μέσω βιβλιογραφικής ανασκόπησης και πειράματος μικρής κλίμακας. Από την βιβλιογραφία προκύπτει ότι στις διαγνωστικές μεθόδους των διαταραχών της ομιλίας, η ενσωμάτωση της τεχνολογίας και ειδικότερα της Τεχνητής Νοημοσύνης, είναι ελλιπής. Η έλλειψη αυτή, έγκειται στο ότι ενώ υπάρχουν τυποποιημένα εργαλεία στις παραδοσιακές διαγνωστικές μεθόδους, δεν τυποποιούνται με τρόπο που να καθιστούν αποτελεσματική τη χρήση της Τεχνητής Νοημοσύνης. Στο πείραμα μικρής κλίμακας που διεξήχθη, εξετάζεται η συμφωνία μεταξύ των διαγνώσεων της Τεχνητής Νοημοσύνης και των παραδοσιακών μεθόδων, χρησιμοποιώντας δείγμα ηχητικών αποσπασμάτων παιδιών με επίσημη διάγνωση. Με μια ποσοτική ανάλυση των σωστών και λανθασμένων προβλέψεων του μοντέλου, το πείραμα επιδιώκει να αναδείξει τις προοπτικές: α) της Τεχνητής Νοημοσύνης ως υποστηρικτικό εργαλείο στη διάγνωση και β) την αξία της τυποποίησης των εργαλείων αξιολόγησης. Με αυτόν τον τρόπο, επιδιώκεται η επιτάχυνση των διαγνωστικών διαδικασιών, αλλά και η ακρίβεια των διαγνώσεων.

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