



ICTSS00120 - Artificial Intelligence Skill Set

Session 5: Identify an Opportunity for Task Automation

Lecturer: Jordan Hill

Learning Objectives

- Understand the role of AI, ML, and DL in workplace automation.
- Identify organizational objectives for AI, ML, and DL.
- Analyze existing organizational AI technologies and processes.
- Identify common tasks and processes suitable for automation.
- Outline the first task in Assessment 1 (AT1).

Assessment 1 (AT1):

- Task 1: Identify an opportunity for task automation using AI.

AI in the Workplace

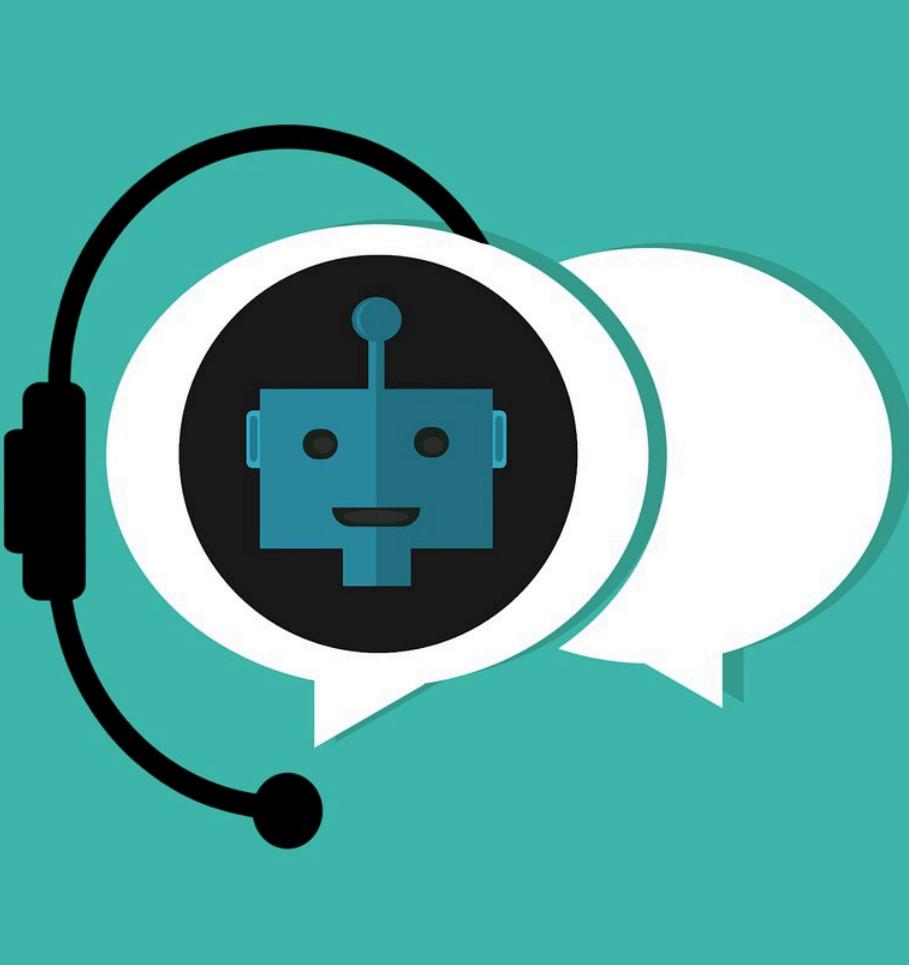
Enhancing Productivity

- **Automating Repetitive Tasks:**
 - Email filtering, data entry, scheduling.
- **Improving Decision-Making:**
 - Predictive analytics, real-time data insights.

Reducing Costs

- **Operational Efficiency:**
 - Streamlining workflows, reducing errors.
- **Resource Optimization:**
 - Predictive maintenance, inventory management.





Common Applications of AI in Business

Customer Service

- **Chatbots**: Automated responses to common queries.
- **Sentiment Analysis**: Understanding customer emotions through text.

Marketing

- **Personalized Recommendations**: Suggesting products based on user behavior.
- **Ad Targeting**: Optimizing ad placements through predictive analytics.

Common Applications of AI in Business

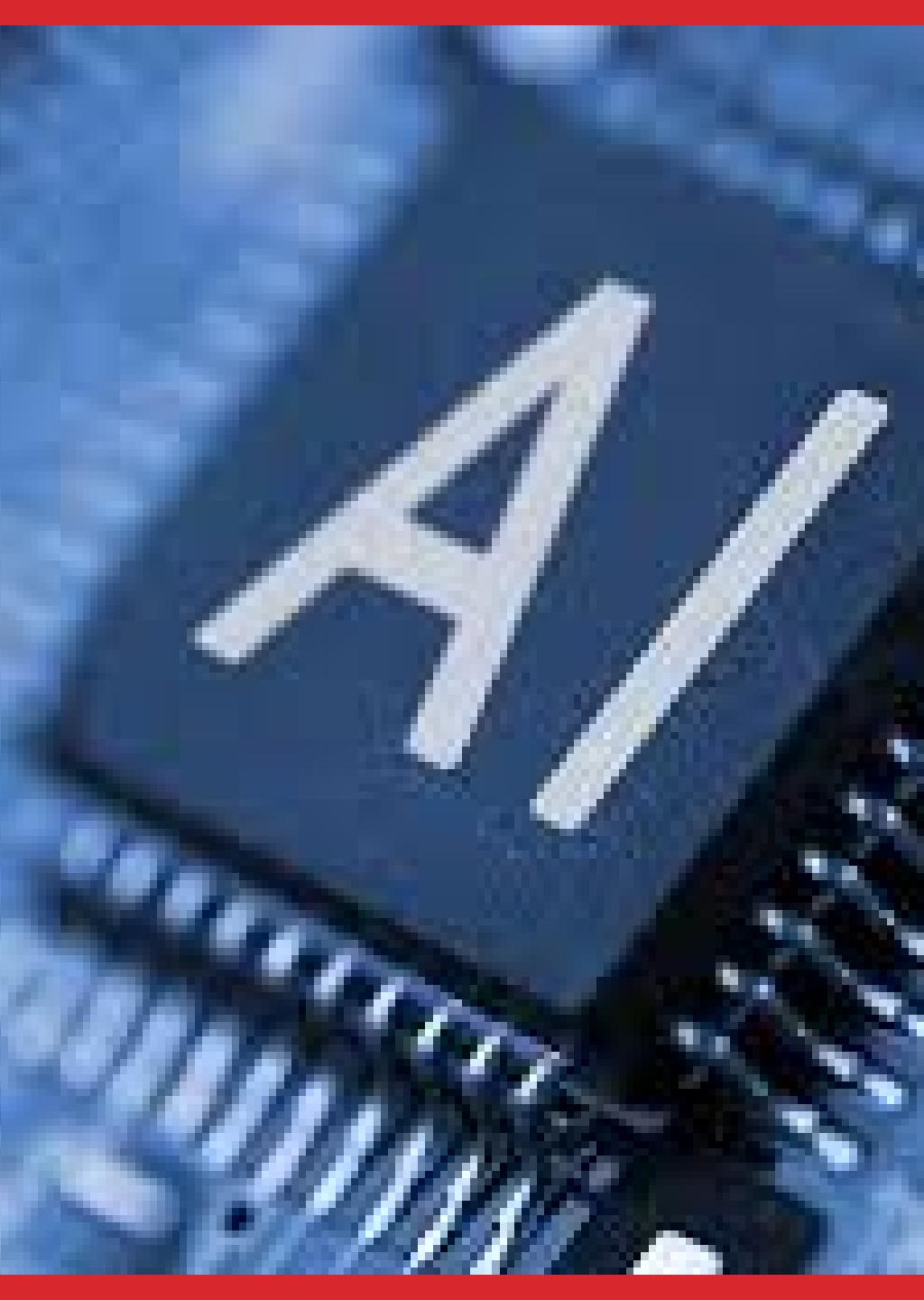
Healthcare

- **Diagnostic Systems**: AI-powered tools to assist doctors in diagnosing diseases.
- **Predictive Analytics**: Identifying potential outbreaks and patient readmissions.

Manufacturing

- **Predictive Maintenance**: Identifying equipment failures before they occur.
- **Quality Control**: Automated inspection of products for defects.





Existing Organizational AI Technologies and Processes

Identifying Organizational Objectives

- **Strategic Goals:** Enhancing efficiency, improving customer satisfaction.
- **Pain Points:** Identifying areas where current processes are inefficient.

Existing AI Technologies

- **CRM Systems:** Using AI for customer relationship management.
- **HR Analytics:** AI for employee performance analysis and recruitment.

Identifying Tasks and Processes Suitable for Automation

Factors to Consider:

- **Repetitiveness**: Tasks that are repetitive and time-consuming.
- **Data Availability**: Availability of historical data for training AI models.
- **Impact**: Potential impact on efficiency and productivity.

Examples:

- **Email Campaigns**: Automating personalized email marketing.
- **Data Analysis**: Using AI to analyze large datasets and extract insights.
- **Customer Support**: Implementing AI chatbots for handling customer queries.

Introduction to the Final Project

Project Overview:

- **Goal:** Use AI to automate a specific task within an organization.
- **Steps:**
 - Identify a task.
 - Collect and preprocess data.
 - Train and evaluate a model.
 - Implement the solution.
 - Present the findings.

Must involve a supervised training method!

In-Class Activity: Task Automation Identification

1. Group Formation: Form small groups for collaboration.

2. Brainstorming Session:

- Identify current repetitive tasks in various departments.
- Discuss the availability of data for these tasks.
- Consider the potential impact of automating these tasks.

3. Present Findings:

- Each group will present the tasks they identified to the class.
- Discuss the feasibility and benefits of automating these tasks.

Summary and Next Steps

Key Takeaways:

- AI can significantly enhance productivity and reduce costs.
- Identify tasks that are repetitive, have available data, and high impact.
- Start the first task in AT1: **Identify an Opportunity for Task Automation.**

Next Week:

- Evaluating Machine Learning Opportunities
- Completing Tasks 2, 3, and 4 of Assessment 1 in class

Questions & Answers

Q&A:

Any questions from today's session??

Contact: jordan.hill@nmtafe.wa.edu.au

