AI ASSISTED PROGRAMMING

MODULE INTRODUCTION

AIAP Module | Atlantic Technological University

"

WELCOME TO THE FUTURE

> *This module is your launchpad into the next generation of software development. We'll explore how to partner with AI to build better software, faster.*

IN THIS MODULE, YOU WILL:

- Master AI tools like GitHub Copilot.
- Boost your coding productivity and creativity.
- Learn to write and debug with AI assistance.

CONTACT INFORMATION

> *For all module-related inquiries, please contact me via email.*

COMMUNICATION

- 📧 Email: daniel.cregg@atu.ie

ENROL IN MODULE ON MOODLE

STEP-BY-STEP ENROLLMENT:

1. Go to **https://vlegalwaymayo.atu.ie/**
2. Search for module **10720**
3. Click on **AI ASSISTED PROGRAMMING**
4. Find your group (A, B, or C)
5. Click **Enrol button**
6. Enter the appropriate password:

Group A
groupa

Group B
groupb

Group C

groupc

MODULE STRUCTURE

⏰ DURATION

- **13 Weeks** total
- This is **Week 1**
- No lab in Week 1

📅 WEEKLY SCHEDULE

- **2 hour** lecture per group
- **2 hours** lab per group
- Check: **timetables.atu.ie**

MODULE LEARNING OUTCOMES

Upon completion of this module, you will be able to:

- **1. Identify and evaluate** the capabilities of various AI powered coding tools, including code generation, completion, and debugging assistants
- **2. Integrate AI-based tools** into a practical software development workflow, demonstrating their use in real-world coding scenarios
- **3. Critically analyse** the benefits and limitations of AI coding assistance, considering code quality, over-reliance, and potential biases
- **4. Explore emerging trends** in the field of AI-assisted programming

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MODULE SYLLABUS

> *You will find a **live syllabus** at the top of the module Moodle page.*

KEY INFORMATION:

- 📋 Detailed week-by-week syllabus breakdown
- 🔄 Updated regularly throughout the module

ASSESSMENT OVERVIEW

Week Due	Assessment Type	Grade Portion
Week 7	MCQ1	**30%**
Week 12	MCQ2	**30%**
Week 13	Project	**40%**

ASSESSMENT DETAILS

📝 MCQ ASSESSMENTS

- Sequential Multiple choice questions
- Based on previous lectures and labs
- **Study tip:** Use Google NotebookLM to generate practice questions

🚀 FINAL PROJECT

- Application in language of your choice
- Use AI tools to assist development
- Must incorporate AI technology
- Follow detailed project brief

EFFORT & EXPECTATIONS

5
Credit Module

100-125
Hours Required

13
Weeks Duration

> ***Self-directed learning*** *will be the main source of learning in this module.*

ESSENTIAL TOOLS & RESOURCES

🛠️ DEVELOPMENT TOOLS

- **GitHub:** Repository storage
- **Codespaces:** Free VM in the cloud
- **GitHub Copilot:** AI programming assistant
- **CLI Tools:** Command line interfaces

🤖 AI TOOLS

- Code generation assistants
- Debugging companions
- Documentation generators
- Code completion tools

ACTION ITEMS - TO DO

🎯 BEFORE NEXT CLASS:

- ✅ **Sign up for GitHub Student Developer Pack**
  - Free access to premium development tools
- 👤 **Change your GitHub username to your actual name**
  - Makes collaboration and grading easier
- 📚 **Enroll in the Moodle module**
  - Access all module materials and announcements
- 📖 **Review the live syllabus**
  - Understand the weekly progression

LOOKING AHEAD

🔮 WHAT'S COMING NEXT

- Deep dive into AI-assisted programming concepts
- Hands-on experience with GitHub Copilot
- Practical coding sessions with AI tools
- Building real applications with AI assistance

> *Get ready to revolutionize how you write code with the power of AI!*

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QUESTIONS & DISCUSSION

ANY QUESTIONS ABOUT:

- Module structure and expectations?
- Assessment methods and timeline?
- Tools and resources needed?
- Enrollment or technical issues?

> *Remember: This module is about learning to work **with** AI, not being replaced by it!*

THANK YOU!

WELCOME TO AI-ASSISTED PROGRAMMING

← Back to Module Index
→ Next Lecture: Introduction to AI-Assisted Programming

Speaker notes