



# Porting AI to New Hardware: A Case Study

Jeremy Bennett  
James Betson  
Lorinc Boer  
William Jones

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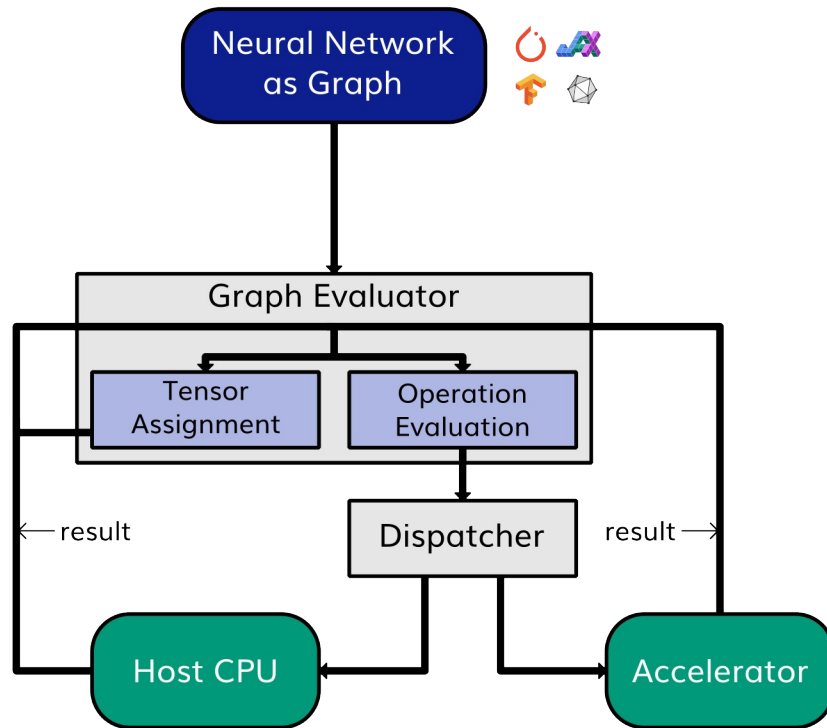


# The Context

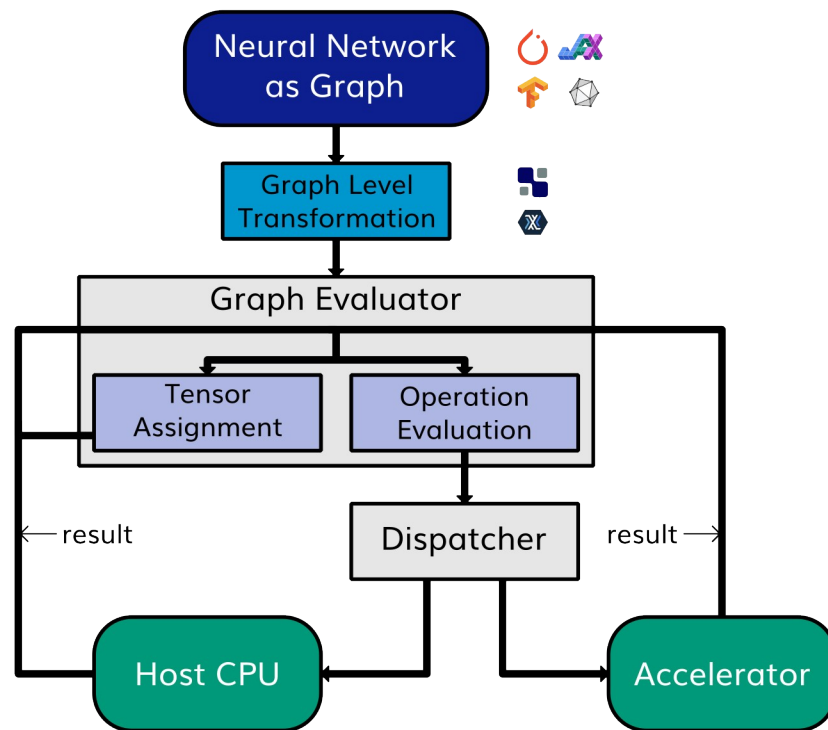
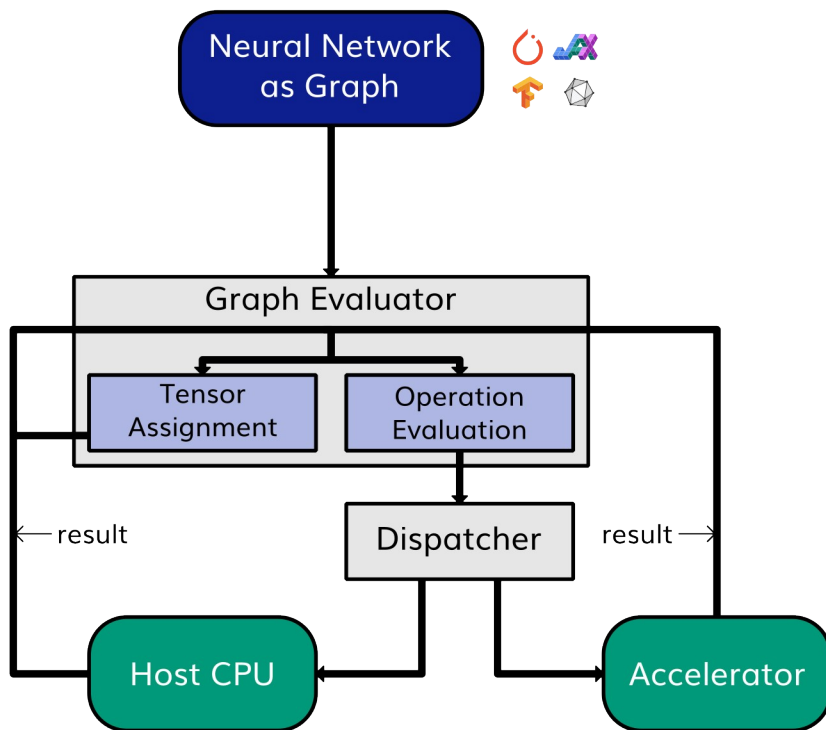
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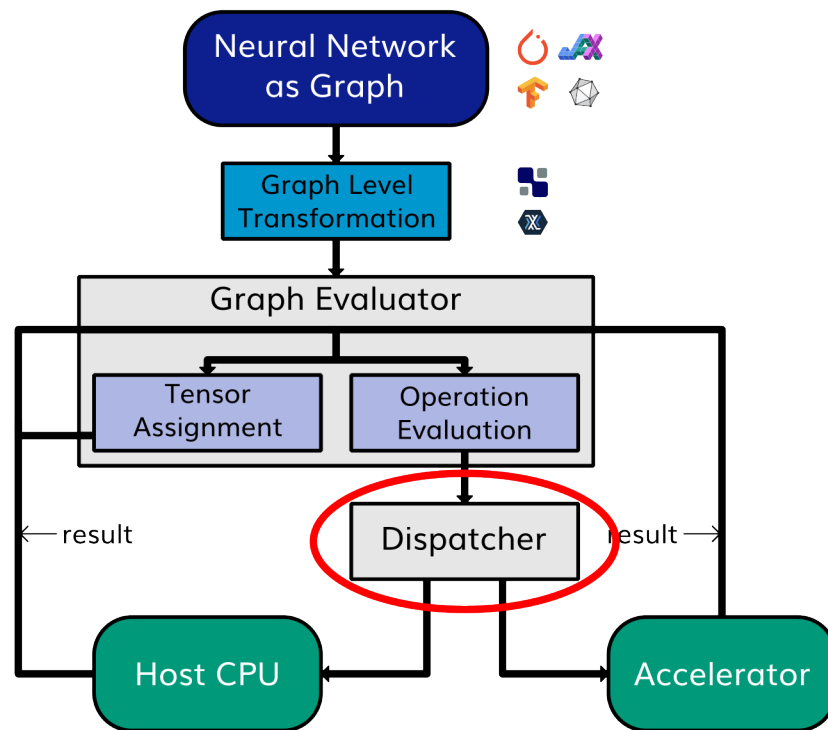
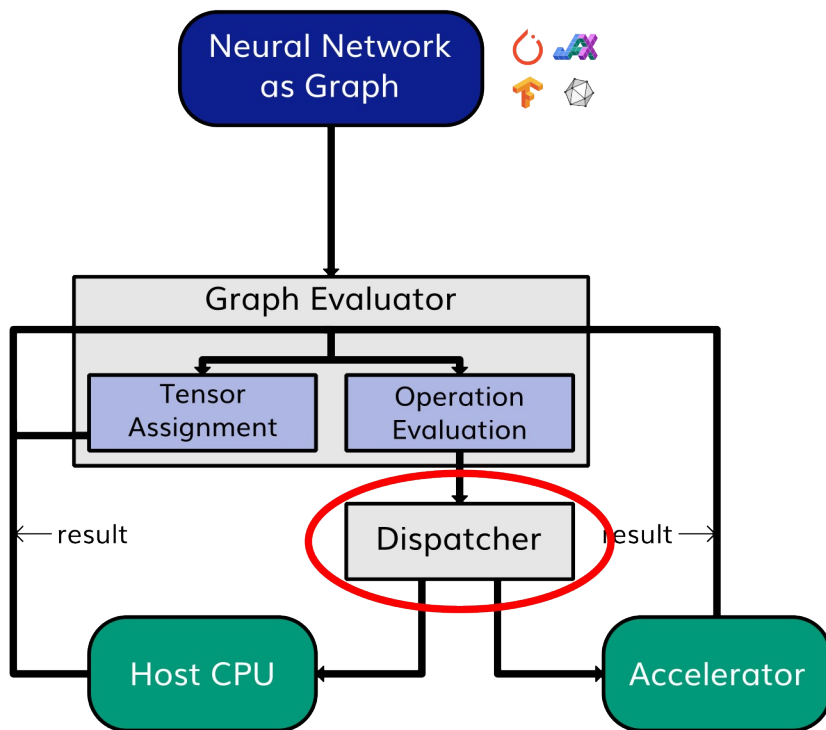
# AI Tooling Overview



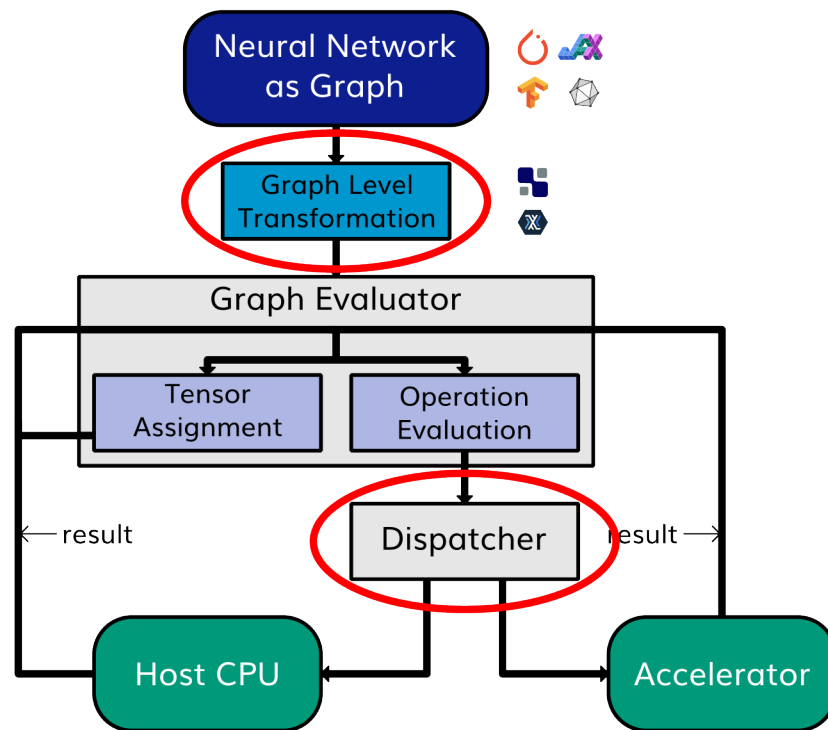
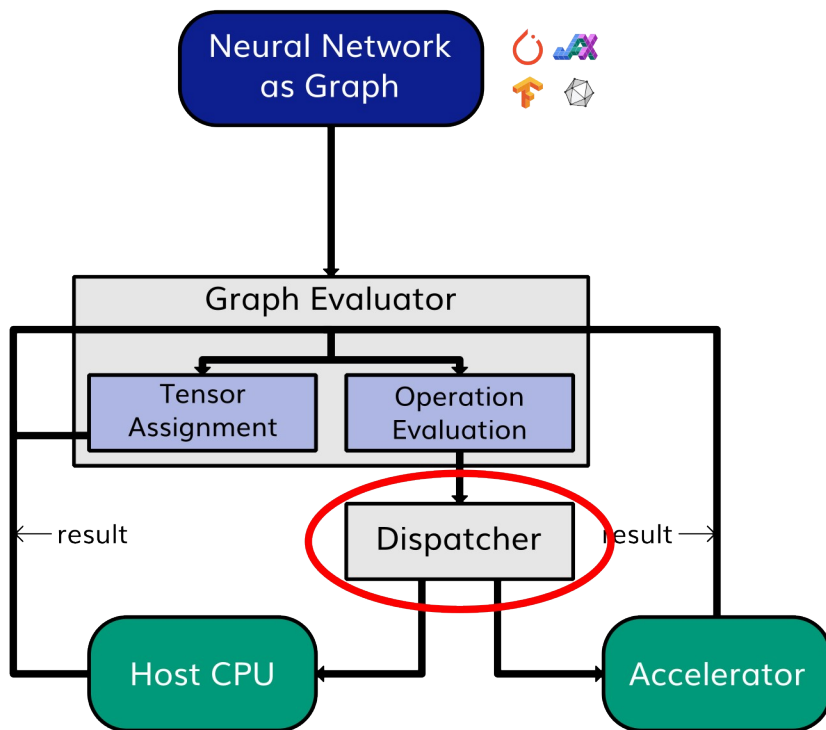
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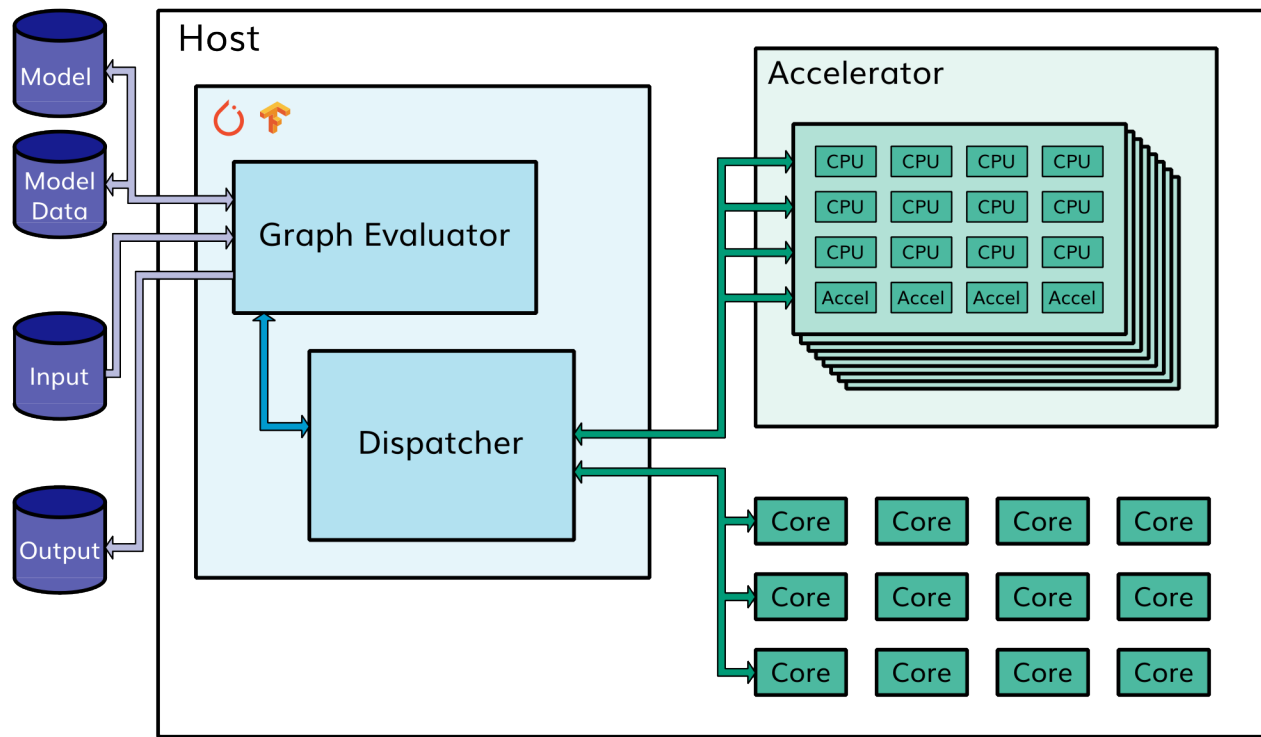
# AI Tooling: Where to Optimize?



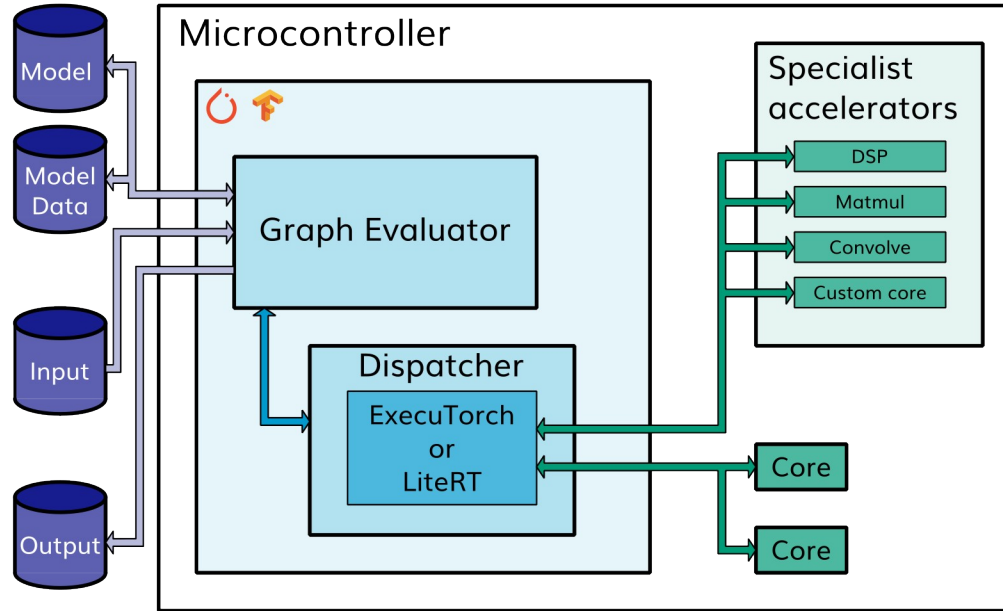
# AI Tooling: Where to Optimize?



# High Performance Co-Processor for AI

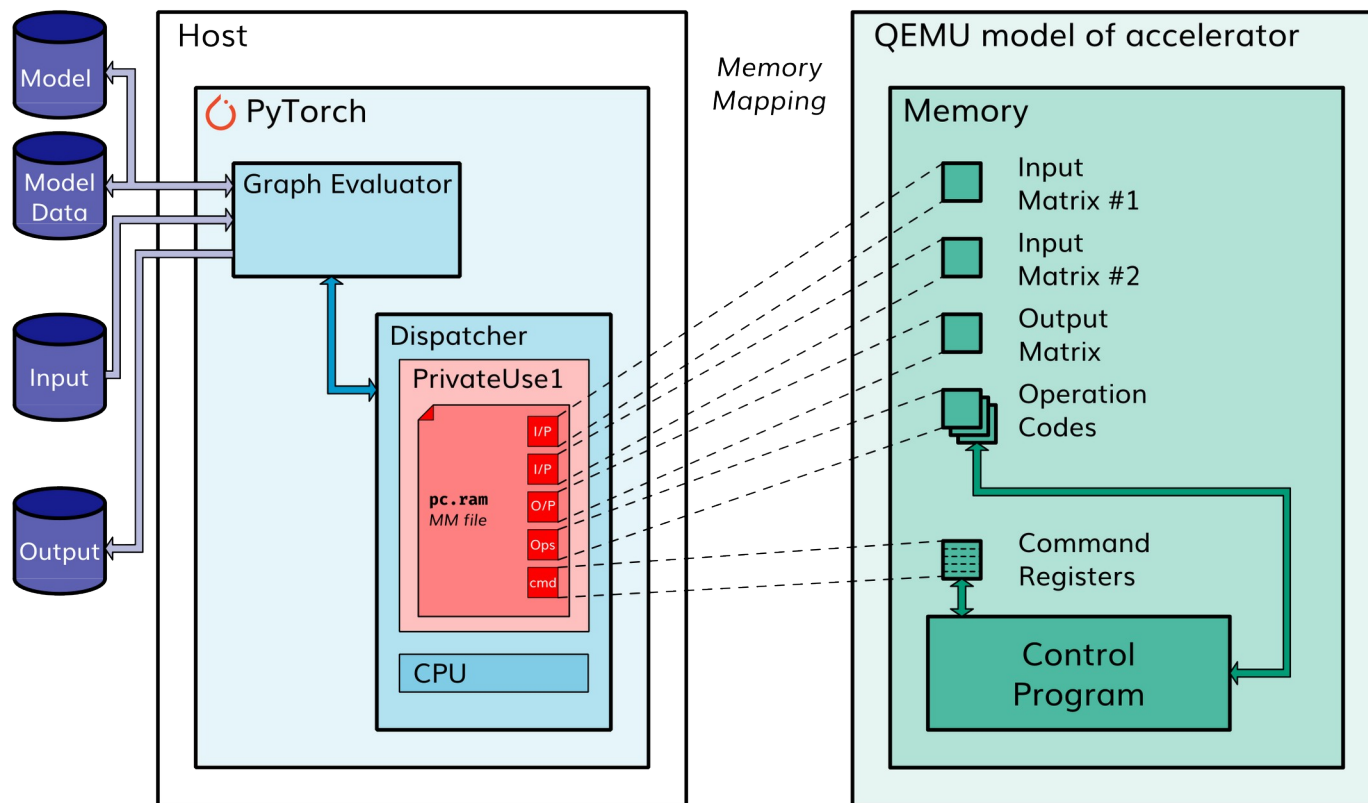


# AI Enabled Microcontrollers

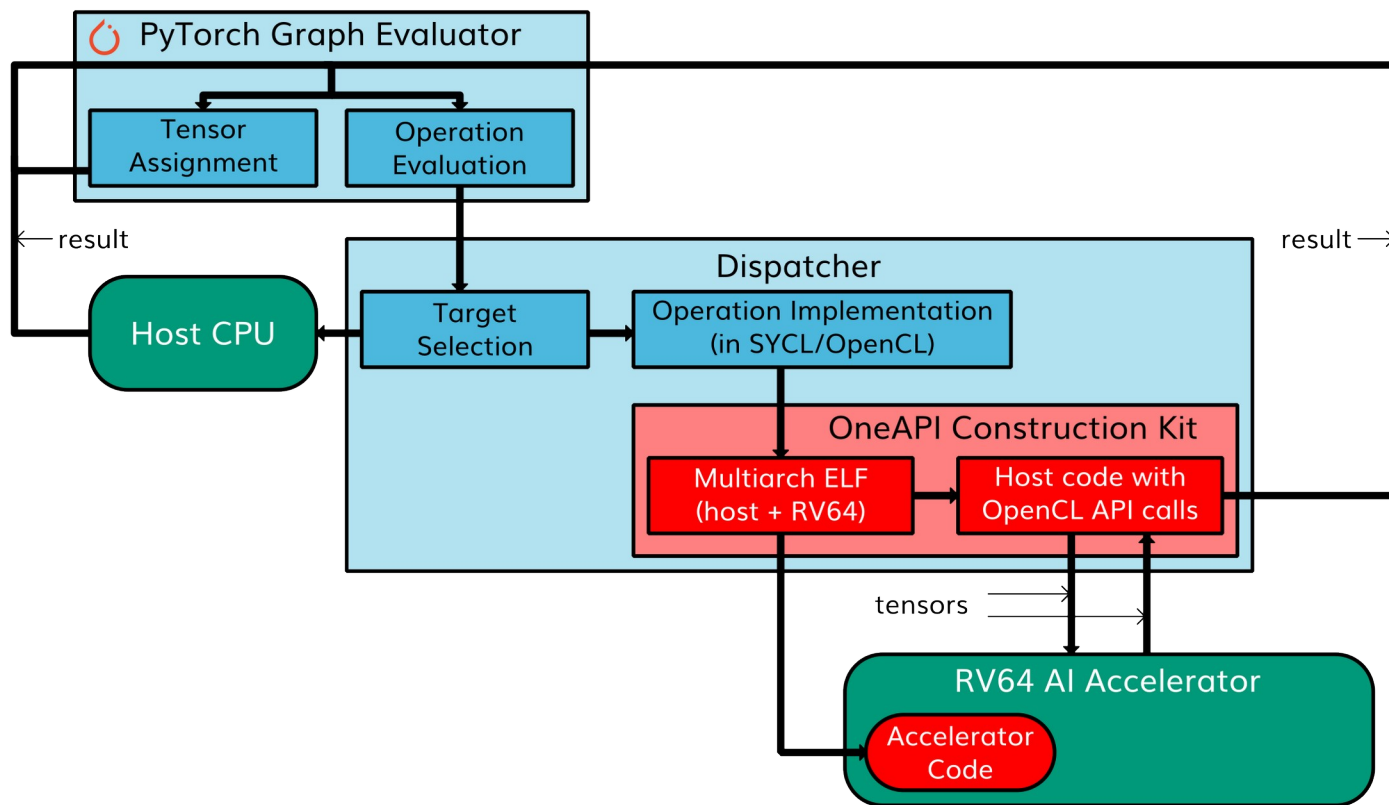




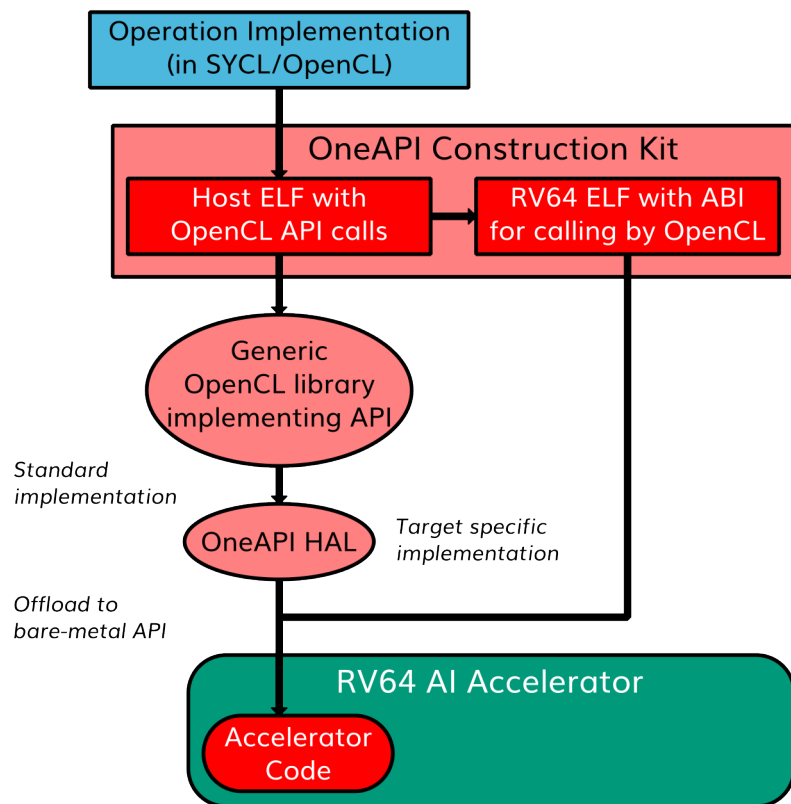
# Developing Pre-Silicon



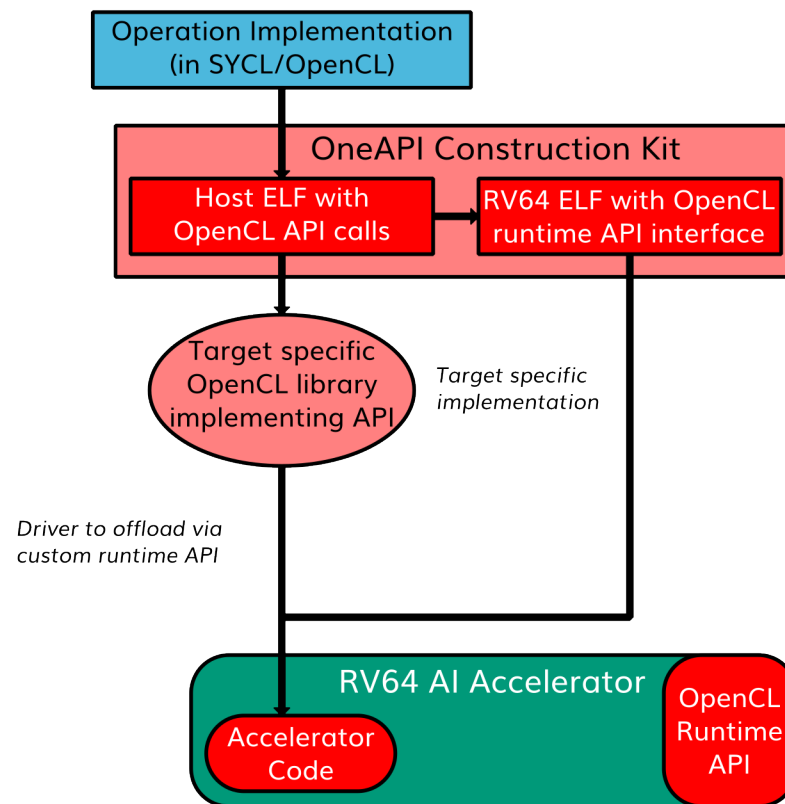
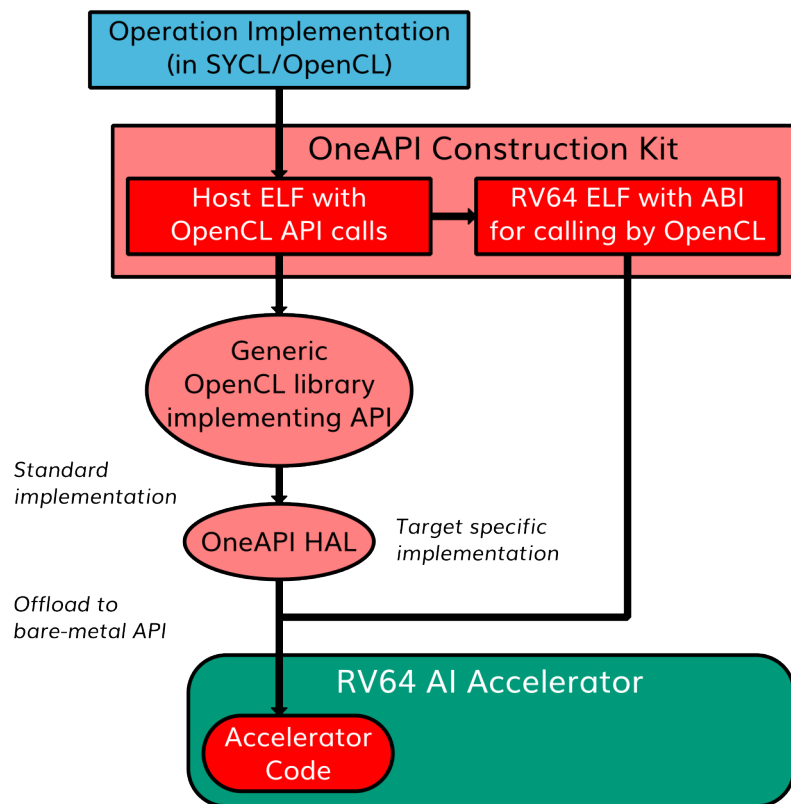
# High Performance RISC-V for AI



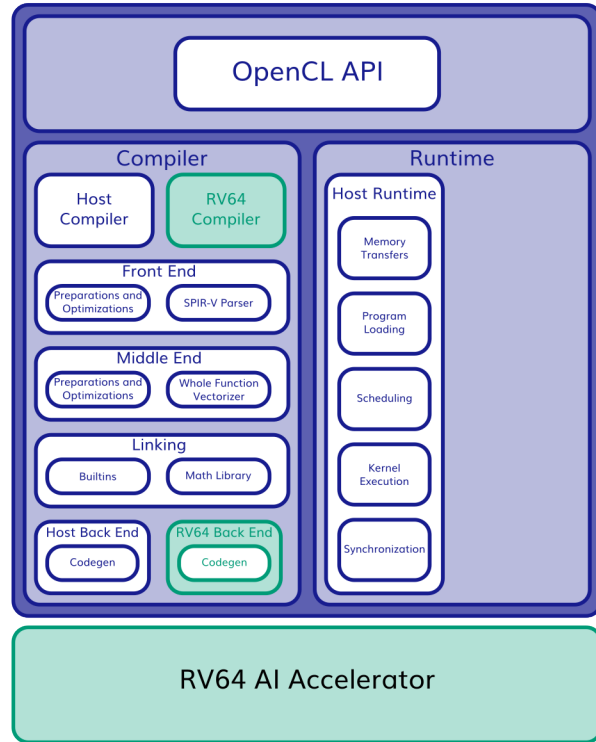
# Implementing OneAPI



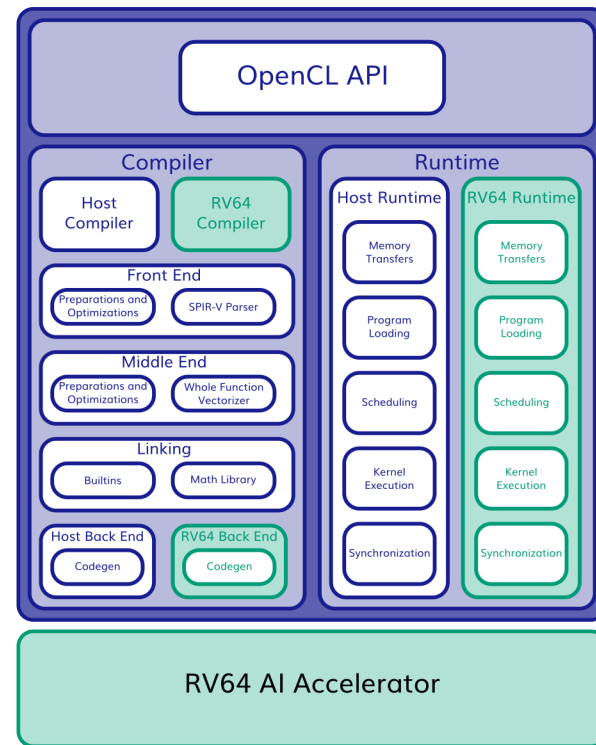
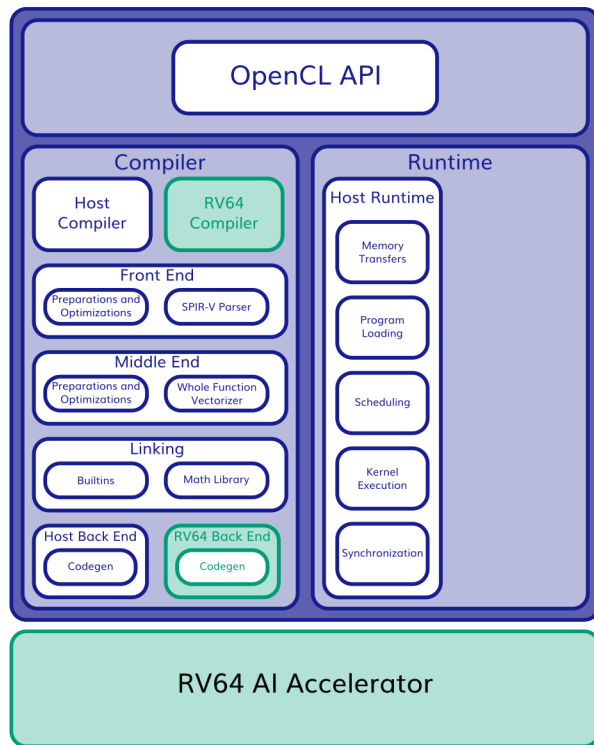
# Implementing OneAPI



# The OneAPI Construction Kit



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# The Challenge of AI Tooling

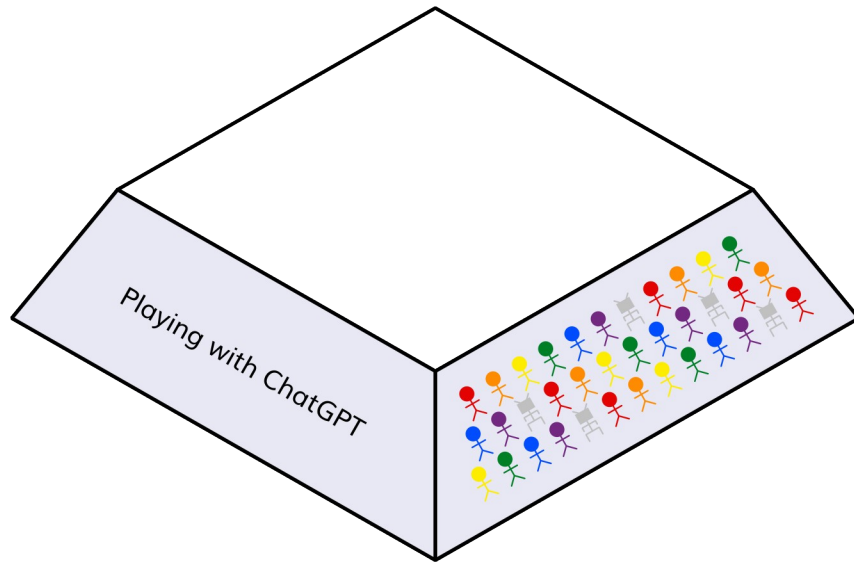
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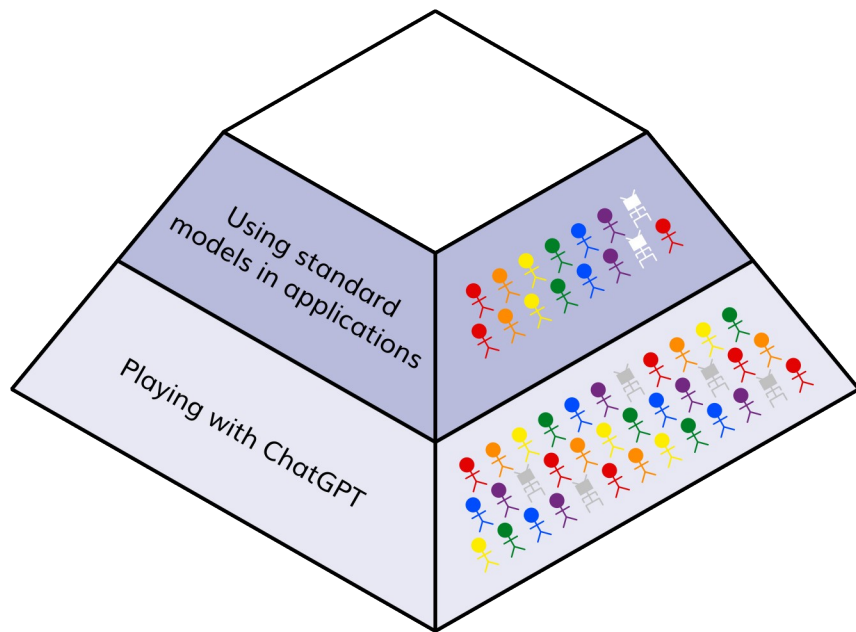
# Bringing Up Your Own AI Tooling



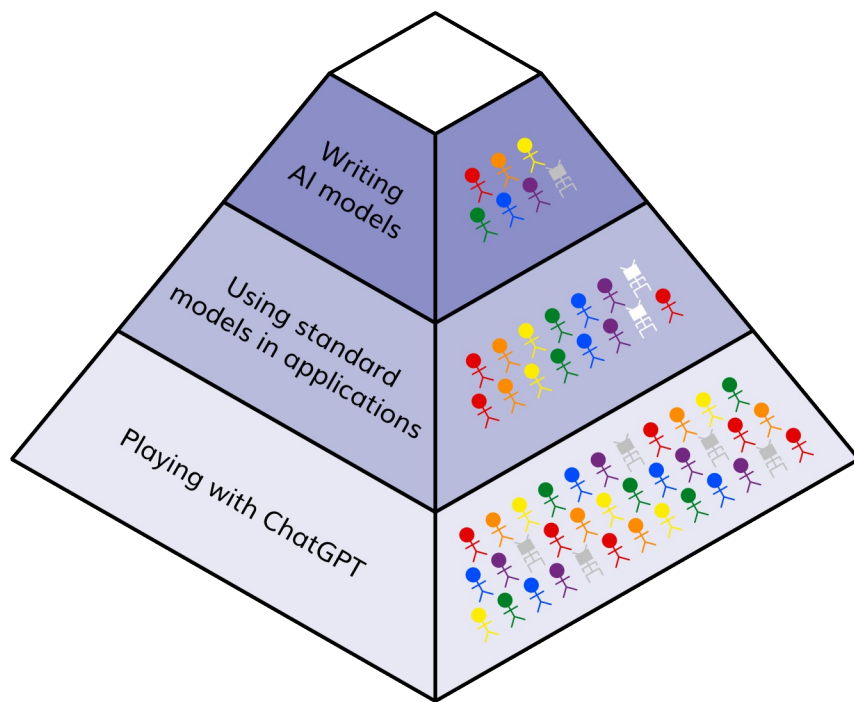
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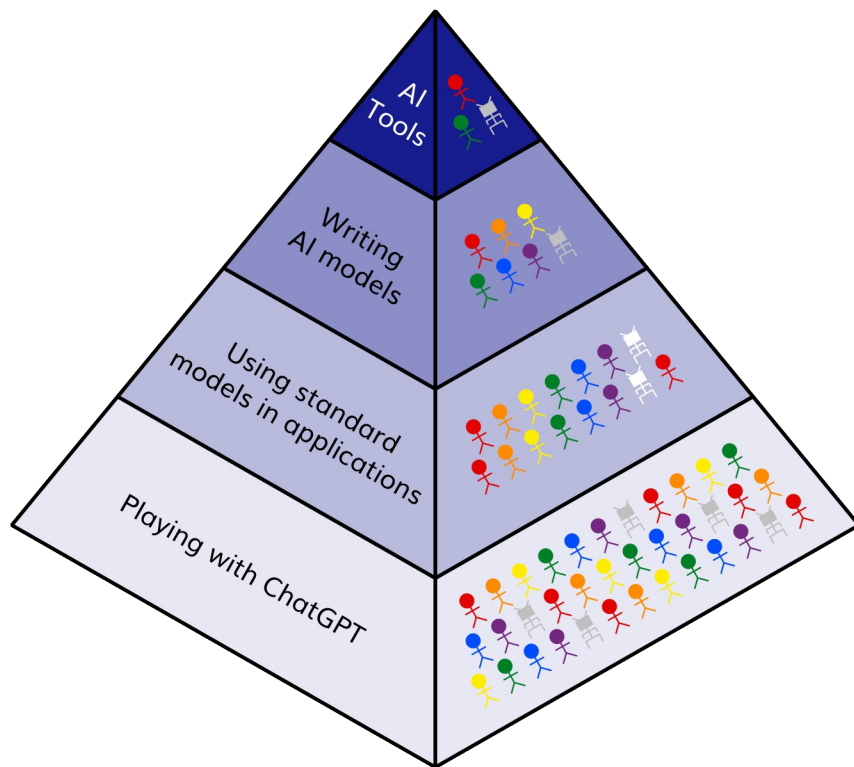
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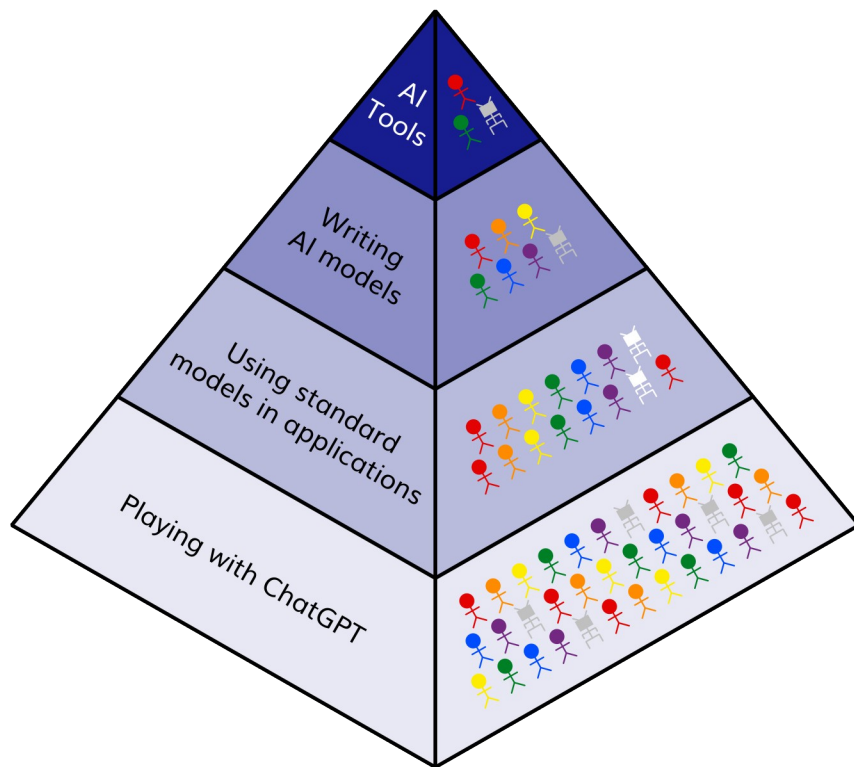
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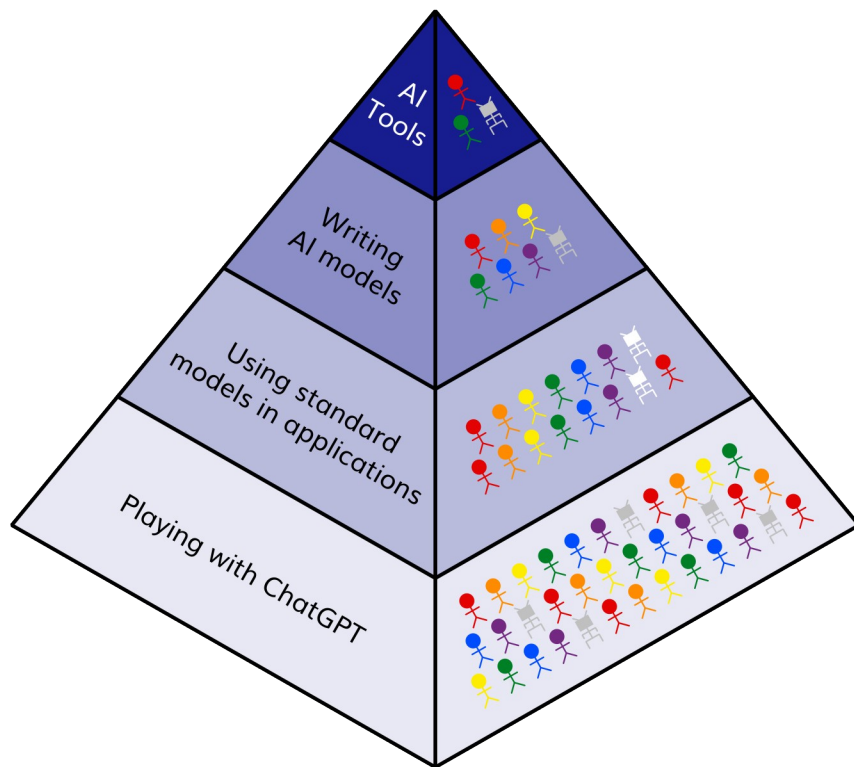


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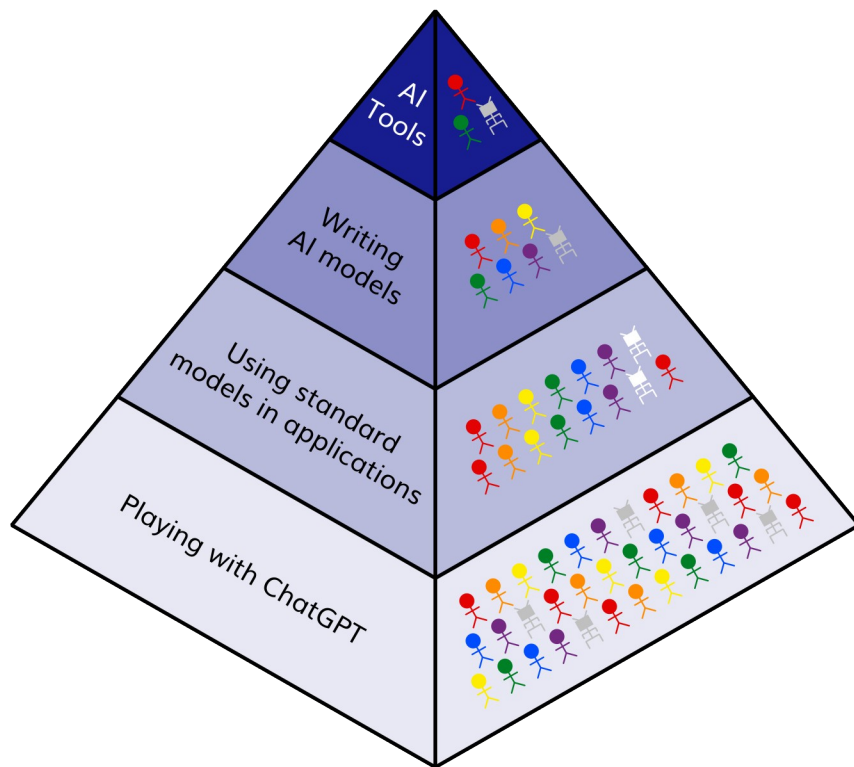
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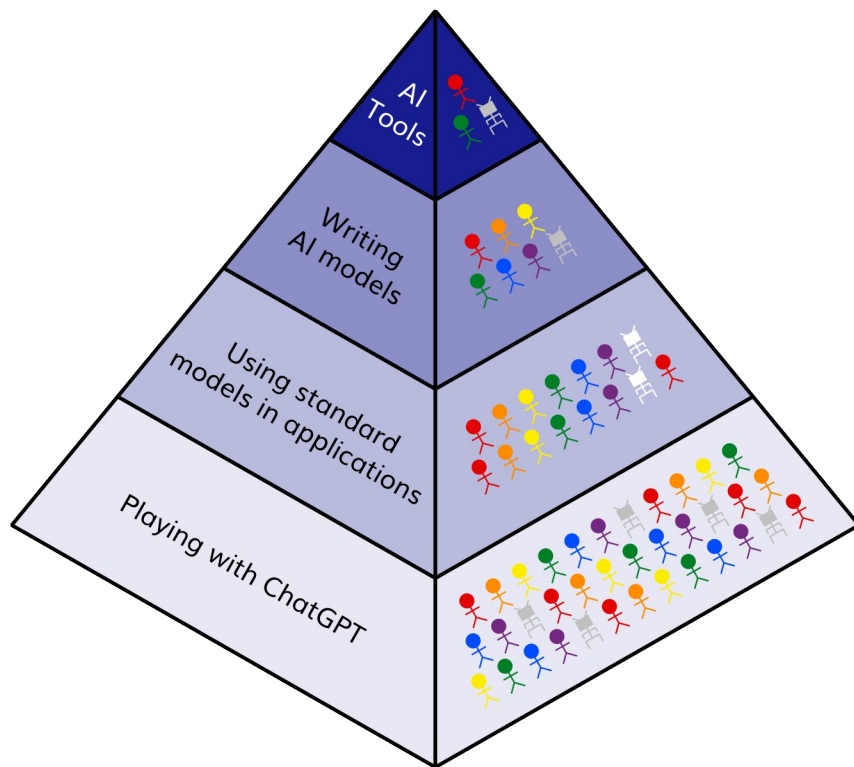
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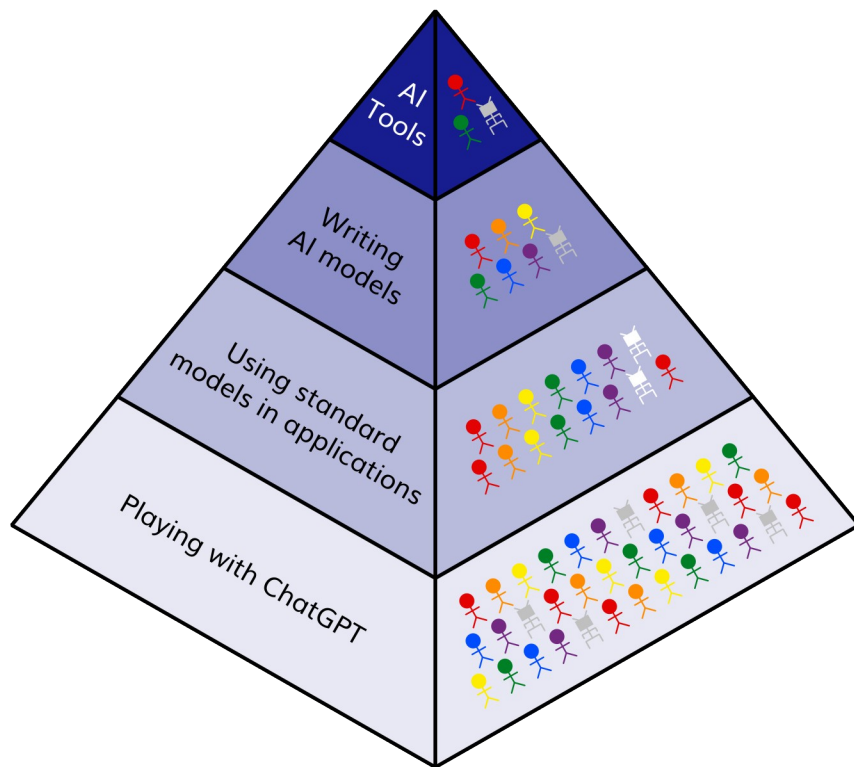
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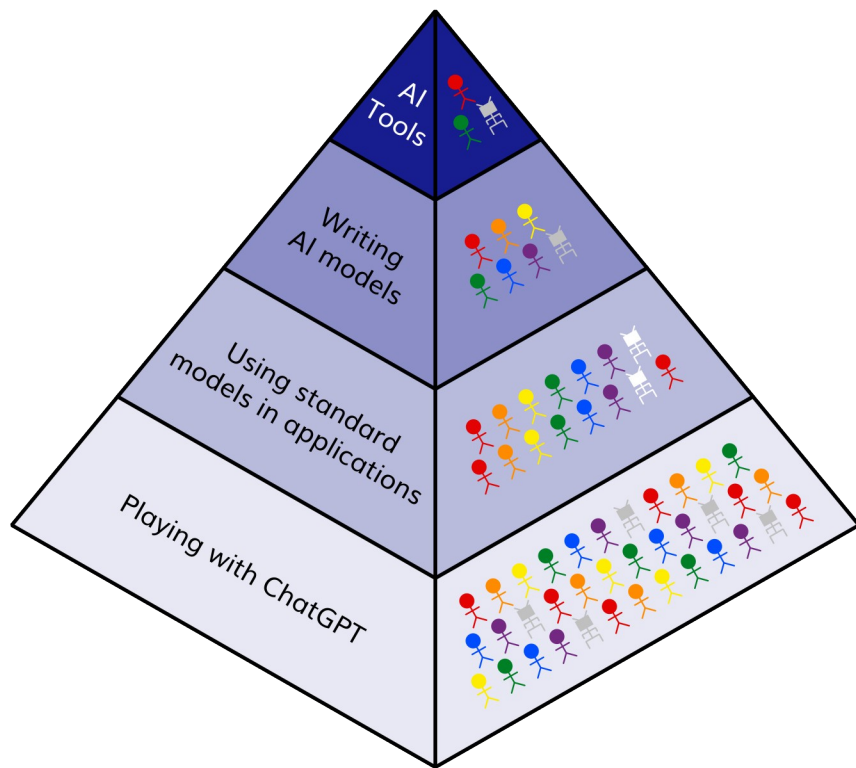


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- Ask Embecosm for help



# Use Case: A Demonstration FPGA AI Accelerator

James Betson  
Lorinc Boer

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# Thank You

**jeremy.bennett@embecosm.com**

**jb1g21@soton.ac.uk**

**lab2g20@soton.ac.uk**

**william.jones@embecosm.com**

**embecosm.com**

**Jeremy Bennett**

**James Betson**

**Lorinc Boer**

**William Jones**