1 INTRODUCTION

PJD's opening remarks

This course follows in footsteps of Great Powers Competition course – acknowledging Clay Moltz and NSA faculty. Here we are exploring Artificial Intelligence, abbreviated AI.

AI is a major strategic concern for Navy, DOD.

At NPS we recently formed an AI consortium of over 60 faculty across campus.

This course is our first major activity.

This course is an overview of the field, seeking to

- Demystify a technology encumbered by hype
- Give you a language for discussing and thinking about AI
- Leave you with a conceptual framework for AI

(We invite you to take our courses if you want the technical details of AI.)

I am a computer scientist, minted in the 1960s as field was being formed.

Currently I am distinguished professor and chair of computer science department.

I have been teaching CS for 50 years.

I've seen many things come and go in computing over the years.

AI was not my first interest even though the MIT AI lab was right down the hall.

My first real contact with AI was a visit to the Stanford AI lab in 1968 when I was interviewing for faculty positions. They showed me a robot arm that stacked three white cubes that I placed randomly on a black tabletop. It was quite impressive. As I probed the details of how it worked, I learned that their visual recognition algorithms relied on some distinctive geometric properties of silhouettes of cube images. The robot could handle exactly three identical cubes – not more or fewer, not different sizes. There was no way to generalize the prototype toward the more general problem of assembly, which they imagined for the near future. The prototype seemed like a dead end. Instead of AI, I devoted myself to operating systems and networks, which would become AI infrastructure.

I've come around and want to help you understand this fascinating field.