

# The Computer Science Major

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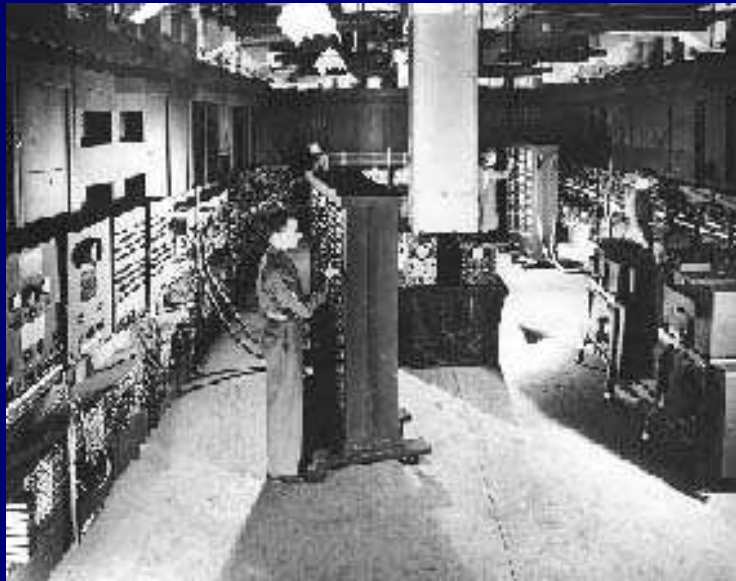
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How Many Computers Do You Own?

*You're wrong.*

# Computers' Changing Role



ENIAC, 1946

Environment and humans  
subservient to computer



BMW 745i, 2002

Computers subservient to  
humans and the  
environment

# What is Computer Science About?

Computer Science  Programming

# What is Computer Science About?

Software and systems

Hardware and architecture

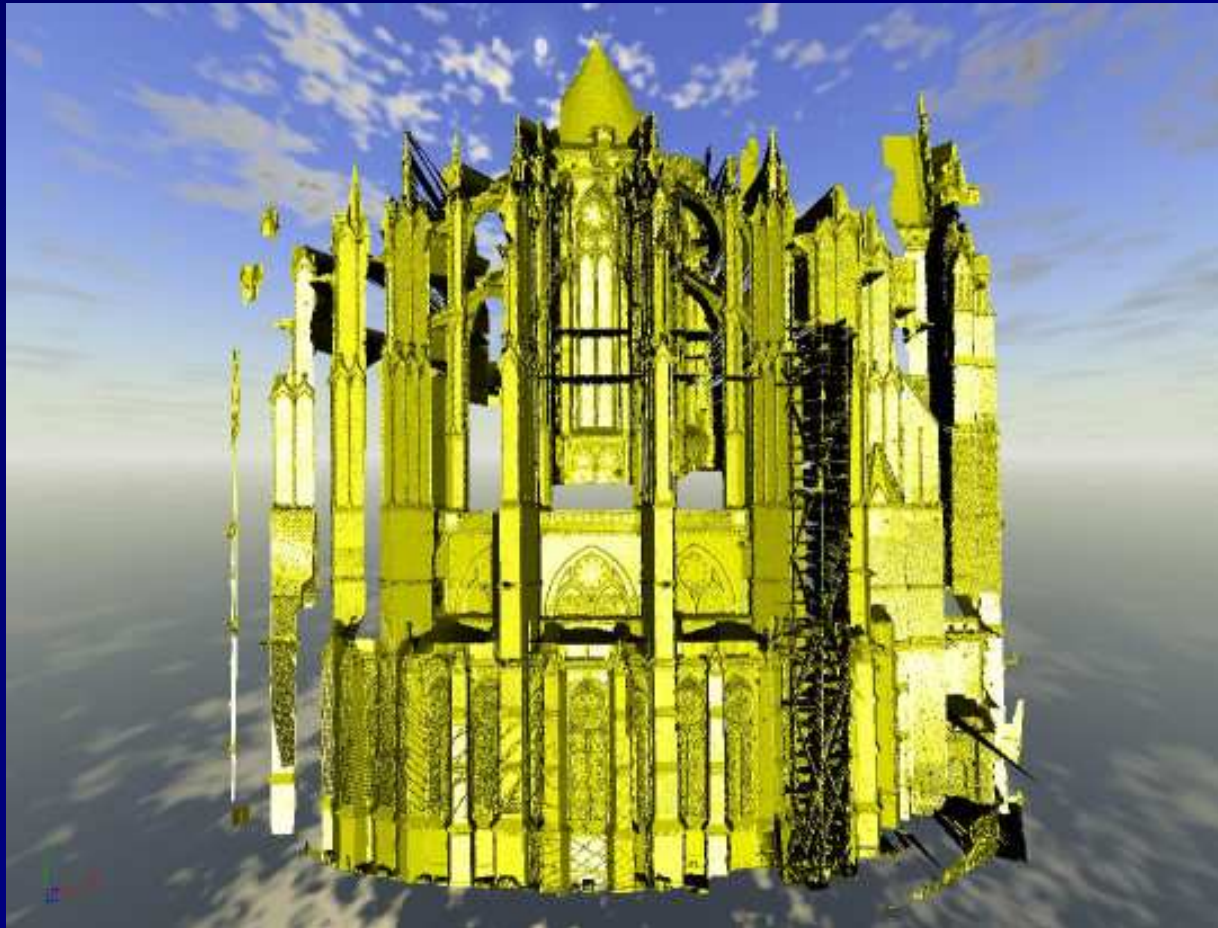
Theory

Artificial Intelligence

User Interfaces

Multimedia

# CS Research at Columbia



Model of the Cathedral of St. Pierre, Beauvais, France.

# CS Research at Columbia



Mobile Augmented Reality on the Columbia Campus



# CS Research at Columbia



Omnidirectional camera for videoconferencing

# Other Topics at Columbia

Security (Keromytis)

Embedded systems (Edwards)

Networking (Misra, Yemini, Schulzrinne)

Databases (Ross)

Internet search (Gravano)

Multimedia: vision (Nayar, Kender)

# What's the Major Like?

10 required core courses

+

One track:

Systems · Theory

Intelligent systems · General CS

+

Technical Electives

# The Core

COMS W1007: Intro to computer science

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COMS W3137: Data structures and algorithms

COMS W3203: Discrete math

COMS W3210: Scientific computation I

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COMS W3824: Computer organization

COMS W3157: Advanced Programming

COMS W3251: Scientific computation II

COMS W3261: Computability

COMS W4701: Artificial intelligence

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COMS W4115: Programming Languages and Translators

# Now What?

Our website: <http://www.cs.columbia.edu>

Freshman/Sophomore advisors

The Bulletin

Fellow Students:

- TAs
- Upperclassmen
- ACM student chapter



Thank you