

RAYE JEAN MONTAGUE

Early Life

Born on January 21, 1935, in Little Rock, Arkansas

Grew up during racial segregation in the South

Became interested in engineering after visiting a captured German submarine as a child

Developed strong skills in math and problem-solving from a young age



Contributions to their field

Created the first computer-generated rough draft of a U.S. naval ship

Used mathematical modeling and computer programming to modernize ship design

Designed the Oliver Hazard Perry-class frigate in less than 24 hours, instead of years

Her work became the foundation for computer-aided naval engineering used today

Education

Graduated from Merrill High School in Pine Bluff, Arkansas, in 1952

Attended Arkansas Agricultural, Mechanical & Normal College (now UAPB)

Wanted to study engineering but was blocked due to racial barriers

Taught herself computer programming while working for the U.S. Navy

Adversity

Faced racial and gender discrimination in a male-dominated field

Initially hired as a clerk despite having strong technical abilities

Denied formal training opportunities given to white male colleagues

Many of her achievements were not publicly recognized until later in life

Fun facts

First woman to manage a U.S. Navy ship design program

Received the Navy's Meritorious Civilian Service Award

Her work directly influenced modern engineering software systems

Continues to inspire women and minorities in STEM fields