

# The History of Women in Technology

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# Agenda

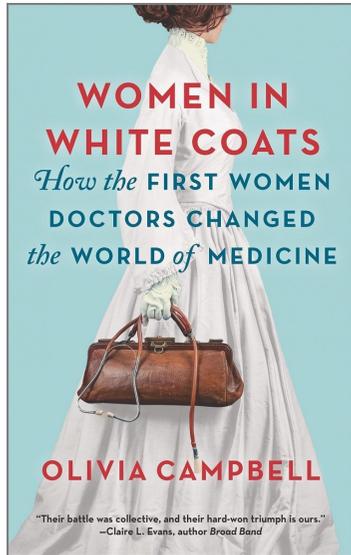
1. Prevailing Social and Cultural Environments
2. Most Recognised & High Profile
3. Other Noteworthy Entrants
4. Early Computing – Bletchley Park, Eniac, General MacArthur
5. Special Mention
6. What Does That Tell Us - Now and Future?

## 1. Prevailing Social and Cultural Environments

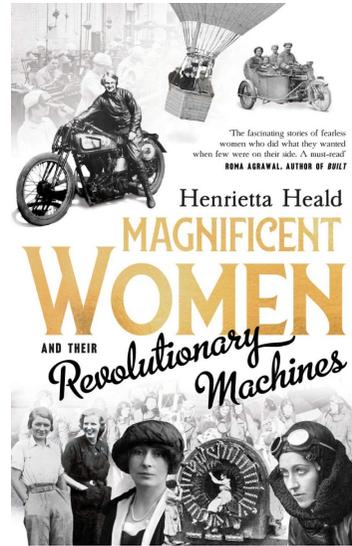
Historical and Cultural barriers:

- Females not permitted to be educated
- Bias against women having any career at all

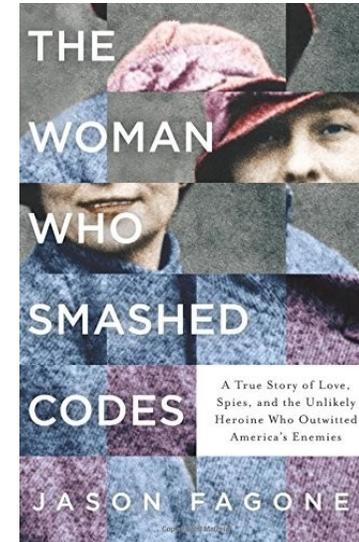
# 1. Prevailing Social and Cultural Environments



2021



2020



2017

Today:

- Social Media Campaigns and #Movements
- Generational Change

Grace  
Hopper



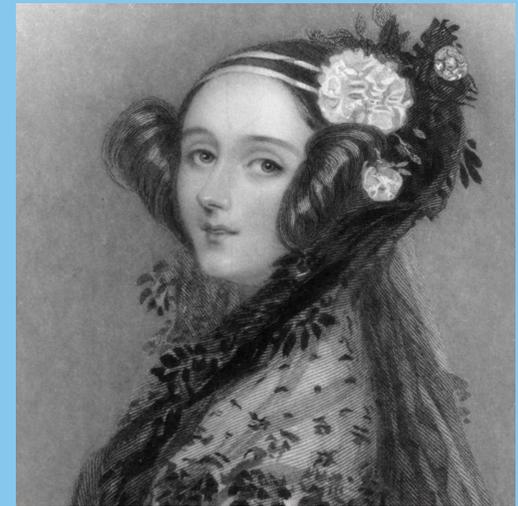
MARKII, Cobol Compiler,  
Bug

Hedy  
Lamarr



Spread Spectrum, WiFi

Ada  
Lovelace



1<sup>ST</sup> programmer,  
Babbage Analytical  
Engine

3 Most Recognised and High Profile historical figures

## 2. Most Recognised & High Profile

### Ada Byron, Countess of Lovelace

Born: London, England  
December 10, 1815

Died: London, England  
November 27, 1852

#### The Facts

- Daughter Lord Byron
- Considered 1<sup>st</sup> coder in the world
- ADA language MIL-STD-1815
- Died Uterine Cancer

#### The Rumours

- Relaxed relationships with men (affairs)
- Gambling addiction
- Pawned family diamonds
- Medication withheld

Analyst, Metaphysician and founder of Scientific Computing

## 2. Most Recognised & High Profile

### Admiral Grace Murray Hopper

Born: New York, New York  
December 9, 1906

Died: Arlington, Virginia  
January 1, 1992

### The Facts

- Compiler – ordinary language instructions
- Overcame obstacles to join the navy
- Mark I and II, UNIVAC
- Bomarc – COBOL
- Naval ship in her honour USS Hopper

### The Rumours

- Computer Bug

Pioneer Computer Scientist

## 2. Most Recognised & High Profile

### Hedy Lamarr

Born: Vienna, Austria-Hungary  
November 9, 1913

Died: Casselberry, Florida  
January 19, 2000

### The Facts

Co Inventor of frequency hopping  
Not used until Cuban Missile Crisis  
1940's actress

### The Rumours

Nazi sympathizer husband  
Motivation to spy

Inventor of Spread Spectrum communications system

Sister  
Mary Keller



Educator. Designed BASIC  
computer language  
1<sup>st</sup> PhD Com Sci (1965)

Katherine  
Johnson

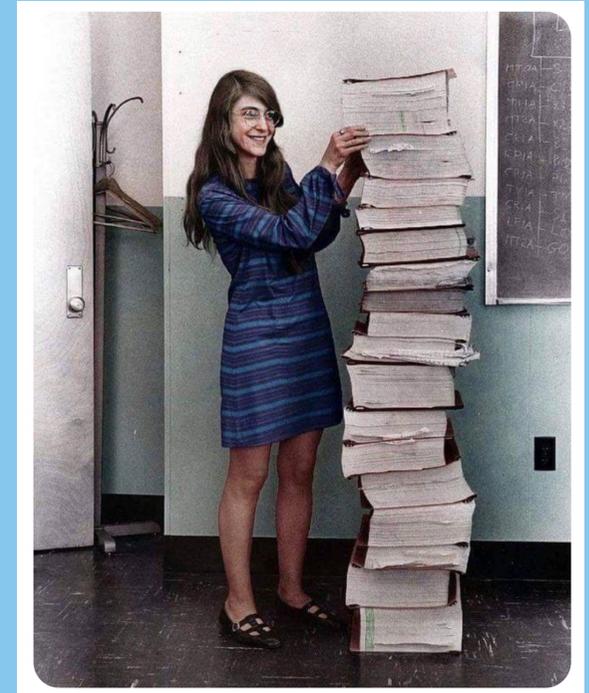
## HIDDEN FIGURES



NASA mathematician

Mary Jackson  
Dorothy Vaughan

Margaret  
Hamilton



Programmer APOLLO  
(Software Engineer)

But wait there is more

## 4. Early Computing

- Colossus                      Bletchley Park, Colossus, Alan Turing, Enigma, TypeX
- ENIAC
- UNIVAC                      Jean Valentine, Ruth Bourne, Mavis Batey (nee Lever),  
Margaret Rock, Joan Murray (nee Clarke), Ruth Briggs and  
Sheila Lawn (nee Mackenzie)
- ILLIAC
- CSIRAC

Cryptologists/Code Breakers

21 Henry Street, Ascot-Brisbane, Queensland Australia

General MacArthur – Central Bureau Code Breakers

Barbara Kitching (nee Gibson), Joyce Morrison, Betty Chessell, (nee Tough), Eve Scott (nee Hicks), Jean Robertson (nee McLennan),  
(Queensland IT Minister Paul Lucas), Dorothy Morrow (nee Hilleard), Margaret Raymond (nee Fullgrabe),  
Absent from picture but there on the day Nancy Goldsteen (Nelson) and Sybil Brady.

## 5. Special Mention

### Hypatia of Alexandria

Born: Alexandria, Egypt  
c. 350-370

Died: Alexandria, Egypt  
March 415

Mathematician, Astronomer and Philosopher

## 6. What Does That Tell Us – Now & Future

Women have been engaged in computing fields since the beginning: **Ada, Grace, Hedy, WWII Code Breakers, Early Computing programmer**

Traditional historical and **cultural barriers existed**. It took strong **determined individuals** to jump those barriers

Over time we are **discovering more** and more significant roles women have played

Future **AI's amplification**