

# DID YOU KNOW?

"Computer" used to be a job description – before the invention of electronic computers – and both men and women were employed. Women were more prominent in the field; a matter of practicality since a large pool of women with training in mathematics could be hired for much less money than men with comparable training.

## 3 groups of women in IT across the eras



MAINFRAME

(business)



PC

(home)

WWW

INTERNET



MOBILE



CLOUD

'40s into '70s

### THE FOUNDERS



*"I was told I'd never make it to VP rank because I was too outspoken. Maybe so, but I think men will always find an excuse for keeping women in their 'place.' So, let's make that place the executive suite and start more of our own companies."*

JEAN BARTIK  
ENIAC PROGRAMMER

'80s into 2000s

### THE BOSSES



*"This idea of quote-unquote 'looking the part' becomes more and more of a challenge when you don't look the part. But there's nothing I can do, or wanted to do, about being a black female ... So at the end of the day, the people who were around me had to do a little bit more adjusting than I did."*

URSULA BURNS  
CEO, XEROX

2010s onwards

### THE ENTREPRENEURS



*"I have very personally felt the overwhelming loneliness, self-doubt, and frustration that often comes with the minority status of a woman in engineering. As much as I can help others get through or avoid those difficult stretches that I myself had to weather, I'd like to."*

TRACY CHOU  
FORMER SOFTWARE ENGINEER, PINTEREST

### Who else features in this group?

**Grace Hopper** – US Navy Admiral and computer scientist

**Erna Hoover** – US mathematician

**Betty Holberton** – One of six original programmers of ENIAC

**Ida Rhodes** – Designed C-10 language

**Katherine Johnson** – Mathematician

**Susan Wojcicki** – CEO of YouTube

**Cheryl Shavers** – Chemist and expert in semiconductors

**Megan Smith** – Vice President at Google

**Marissa Meyer** – co-founder of Lumi Labs

**Meg Whitman** – served as president and CEO at eBay

**Jennifer Pahka** – founder and executive director of Code for America

**Ellen Pao** – activist and co-founder of Project Include

**Joy Buolamwini** – founder of the Algorithmic Justice League

**Sukinder Singh** – founder of JOYUS

**Divya Nag** – founder of StartX and co-founder of Stem Cell Theranostics

### Observations

This cohort had an appropriate (mathematics) educational foundation to draw upon. Clusters of women working together (Bletchley Park, NASA, ENIAC 6) were normal and successful. WWII required women to work in non-traditional roles to support the war effort. Early users of computing were governmental (especially defence and universities).

Most in this cohort won leadership roles in tech companies based on an engineering-focused career path. Over this period women enjoyed emerging success and opportunity within technology corporates inline with other sectors (yet the small numbers at the top have not grown since). Only in the last twenty years did women start filling CxO roles.

Described as entrepreneurs this group could also be described as activists. They have claimed independence and are motivated to drive change. In many cases their businesses to promote participation of women and minority group (or they use the proceeds of their business for this ie coding camps and online learning resources).