
Informatik für alle

Was steckt dahinter und welche Berufsfelder gibt es?

HAGENBERG | LINZ | STEYR | WELS



UNIVERSITY
OF APPLIED SCIENCES
UPPER AUSTRIA

The Women Who Changed The Tech World

Ada
Lovelace



Grace
Hopper



Hedy
Lamarr



Annie
Easley



Mary
Wilkes



Adele
Goldberg



Radia
Perlman



Katherine
Johnson



Karen
Sparck-Jones



Elizabeth
Feinler





Grace Hopper Pioneers Computer Programming

American Grace Hopper (1906–1992) was an admiral in the United States Navy and a computer scientist who was one

of the first programmers for the Harvard Mark I computer, which was a general purposes electromechanical computer used in the war effort for World War II, according to [San Diego Supercomputer Center](#). In 1944, she created a 500-page Manual of Operations for the Automatic Sequence-Controlled Calculator for the computer, which detailed the foundational operating principles of computing machines.

Hopper is also the inventor of the compiler, an intermediate program that translates English language instructions into the language of the target computer. This invention influenced other computing developments, like code optimization, subroutines, and formula translation.

Hopper is remembered at the annual [Grace Hopper Celebration](#), the world's largest gathering of women technologists.

Ada Lovelace Becomes the World's First Computer Programmer

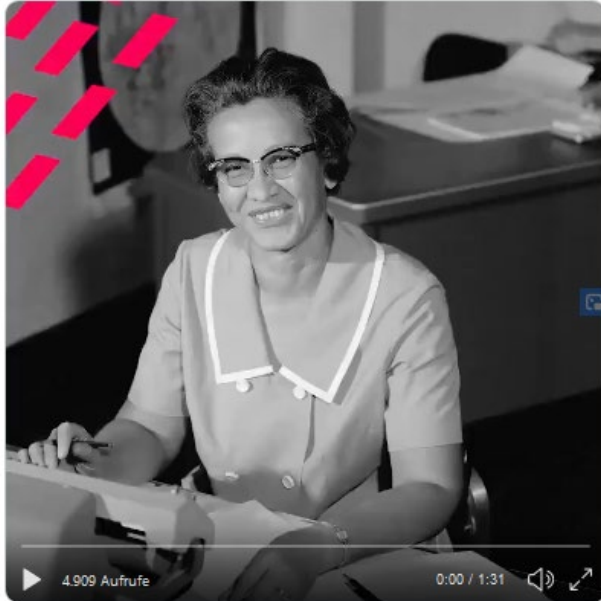
London-born Ada Lovelace (1815–1852) had a passion and gift for mathematics from a young age. She is credited with being the [world's first computer programmer](#), as she drafted plans for how a machine called the Analytical Engine could perform computations. The machine, invented by her friend, mathematician and inventor Charles Babbage, is considered to be the first general computer. Lovelace detailed applications for the Analytical Engine that relate to how computers are used today.



Lovelace is remembered annually on [Ada Lovelace Day](#), held on the second Tuesday of October. The international day of recognition celebrates women in science, technology, engineering, and math (STEM).

Katherine Johnson, a mathematician who broke barriers at NASA, passed away at 101 years old.

@MAKERSwomen
#womenintech #womeninscience



Follow

In 1967, #GraceHopper told @Cosmopolitan that "Women are natural at computer programming" #TBT



The Computer Girls

BY LOIS MANDEL

A trainee gets \$8,000 a year
...a girl "senior systems analyst"
gets \$20,000—and up!

Twenty years ago, a girl could be a secretary, a school teacher . . . maybe a librarian, a social worker or a nurse. If she was really ambitious, she could go into the professions and compete with men . . . usually working harder and longer to earn less pay for the same job.

Now have come the big, dazzling computers—and a whole new kind of work for women: programming. Telling the miracle machines what to do and how to do it. Anything from predicting the

computer can solve a problem, and then instruct the machine to do it."

"It's just like planning a dinner," explains Dr. Grace Hopper, now a staff scientist in systems programming for Univac. (She helped develop the first electronic digital computer, the Eniac, in 1946.) "You have to plan ahead and schedule everything so it's ready when you need it. Programming requires patience and the ability to handle detail. Women are 'naturals' at computer programming."

Wo findet ihr IT in eurem Leben?

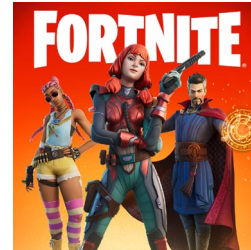


Welche IT / Informatik Berufe kennt ihr?

Technische*r Redakteur*in
 Systemanalytiker*in
 Datenbankadministrator*in
 Security-Spezialist*in
 IT-System-Elektroniker*in
 Effects Artist
 Concept Artist
 Grafikdesigner*in
 Web-Entwickler*in
 Anwendungsentwickler*in
 Front-End-Entwickler*in
 Project Manager*in
 Service Designer*in
 Mediengestaltung-/produktion
 Bioinformatiker*in
 Back-End-Entwickler*in
 Data Scientist
 Technische*r Produktdesigner*i
 Product/Project Owner
 Interaction Designer*in
 Application Engineer
 System Analyst
 App-Entwickler*in
 IT-Berater*in
 System Architect
 Level Designer*in
 Social Media Manager*in
 System Tester*in
 Requirements Engineer
 System Integrator
 Systemadministrator*in
 User Experience Designer*in
 Software Engineer
 Systemintegrator*in
 Medizininformatiker*in
 Gamer Artist / Designer*in
 Interface Designer*in
 Web-Designer*in
 Full Stack Entwickler*in
 Wirtschaftsinformatiker*in
 Animator*in
 Netzwerkadministrator*in
 Technical Artist
 SEO Manager*in

Software Entwickler*in / Programmierer*in

- programmiert Computerprogramme und Apps in einer Programmiersprache
- überlegt welche Funktionen die Programme haben sollen
- testet die Software, ob sie funktioniert
- schreibt alle Informationen zur Software auf
- wird auch in Zukunft immer gebraucht
- auf der ganzen Welt möglich
- gut bezahlt
- ein echter Job für Tüftler*innen

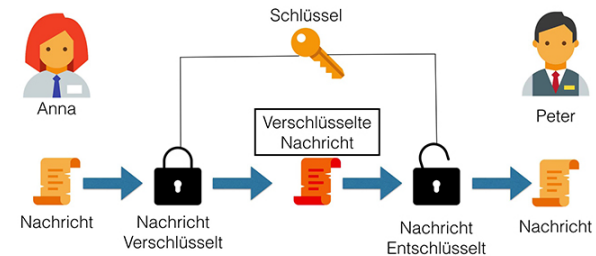


```
if (typeof console.markTimeline === undefined) {  
  module.verbose('Mark timeline not available, normalizing events');  
  window.console.markTimeline = function() {};  
}  
  
consoleClear: function() {  
  module.debug('Disabling programmatic console clearing');  
  window.console.clear = function() {};  
}  
  
requestAnimationFrame: function() {  
  module.debug('Normalizing requestAnimationFrame');  
  if (window.requestAnimationFrame === undefined) {  
    module.debug('RequestAnimationFrame not available, normalizing event');  
    window.requestAnimationFrame = window.requestAnimationFrame ||  
    window.mozRequestAnimationFrame ||  
    window.webkitRequestAnimationFrame ||  
    window.msRequestAnimationFrame ||  
    function(callback) { setTimeout(callback, 0); };  
  }  
},  
  
moduleExists: function(name) {  
  // ...  
}
```



Security Spezialist*in

- sichert des Netzwerk und die Daten die darin verarbeitet werden ab
- überprüft Software, Programme und Netzwerke auf Schwachstellen
- bewertet das Risiko von Hackern angegriffen zu werden
- abwechslungsreich
- anspruchsvoll
- strukturiert
- spannend
- zukunftssicher



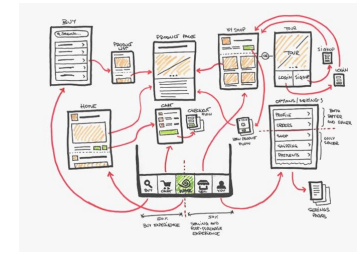
Game Artist / Designer*in

- baut Spielideen auf und setzt diese um
 - gestaltet Level, Charaktere und Missionen
 - beschreibt die Spielgeschichte (Story)
 - erstellt Grafiken und Layouts für die virtuelle Spielumgebung
 - legt den Spielmodus fest
-
- kreativ
 - kommunikativ
 - spannend
 - abwechslungsreich



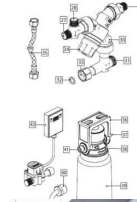
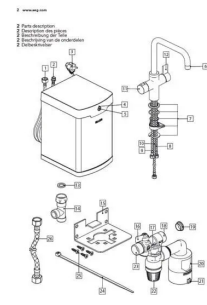
Web-Entwickler*in / Designer*in

- entwickelt Websites und setzt diese technisch um
- erstellt Entwürfe wie die Website aussehen könnte
- überlegt, welche Funktionen die Website haben soll
- testet, ob die Website funktioniert
- ideal für kreative Köpfe
- abwechslungsreich und innovativ
- gut bezahlt
- spannende Aufgaben



Technische Redakteur*in

- spricht mit Software Entwickler*innen und Techniker*innen
- schreibt technische Dokumentationen die für alle verständlich sind
- erstellt Unterlagen wie z.B. Betriebsanleitungen und Schulungsmaterialien
- übersetzt unterschiedliche Dokumente/Informationen
- vielseitig
- kreativ
- kommunikativ
- stark nachgefragt
- Job für die Zukunft



Welche Fähigkeiten braucht man?

LERNKOMPETENZEN



KRITISCHES DENKEN



KREATIVITÄT



KOMMUNIKATION



KOLLABORATION

DIGITALE KOMPETENZEN



INFORMATION



MEDIEN



TECHNOLOGIE

LEBENSKOMPETENZEN



FLEXIBILITÄT



FÜHRUNG



INITIATIVE



PRODUKTIVITÄT



SOZIAL

Informatik für alle

Was steckt dahinter und welche Berufsfelder gibt es?

HAGENBERG | LINZ | STEYR | WELS



UNIVERSITY
OF APPLIED SCIENCES
UPPER AUSTRIA