



**MAGAZINE**

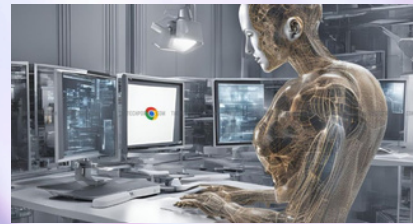
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# Byte Quest

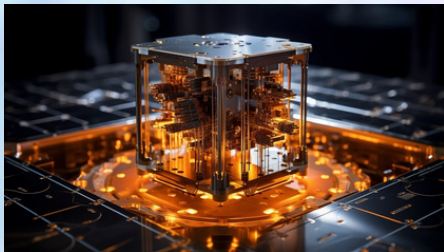
Department of  
**CSE**



Google working on Project Jarvis, an 'AI computer agent' that can autonomously operate web browsers



AI Writes Over 25% Of Code At Google— What Does The Future Look Like For Software Engineers?



**Quantum Computing**



**Edge computing**

## Department Vision

*To be a center for academic excellence in the field of Computer Science and Engineering education to enable graduates to be ethical and competent professionals.*

### **FACULTY COORDINATORS**

**DR. BHARGAVI PEDDIREDDY**  
(ASSOCIATE PROFESSOR)  
**S. KOMAL KAUR**  
(ASST. PROFESSOR)

## Department Mission

*To enable students to develop logic and problem solving approach that will help build their careers in the innovative field of computing and provide creative solutions for the benefit of society.*

### **STUDENT COORDINATORS**

**D.sriramreddy**  
**N.TrivendarReddy**



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## Google working on Project Jarvis, an 'AI computer agent' that can autonomously operate web browsers

With companies focusing heavily on AI-driven automation, the competition is intensifying. Microsoft, a primary supporter of OpenAI, is advancing its Copilot Vision, while Anthropic has also made significant progress. OpenAI itself is reportedly developing AI models designed to interact with computers and automate various tasks.



A new AI assistant, Jarvis, promises to revolutionize how users complete everyday tasks. With Jarvis, users won't have to spend extensive time on activities like researching for dissertations, online shopping, or making travel arrangements. Instead, Jarvis will handle these tasks for them by gathering information, comparing options, and compiling relevant data, allowing users to make quicker, well-informed decisions.

## AI Writes Over 25% Of Code At Google— What Does The Future Look Like For Software Engineers?

The increasing integration of AI in software development is significantly impacting the industry, as highlighted by Google CEO Sundar Pichai during the company's recent earnings call. Pichai disclosed that over 25% of the code for Google's products is now generated by AI, overseen and refined by human engineers. This AI-driven approach, according to Pichai, is enhancing productivity and accelerating project timelines.



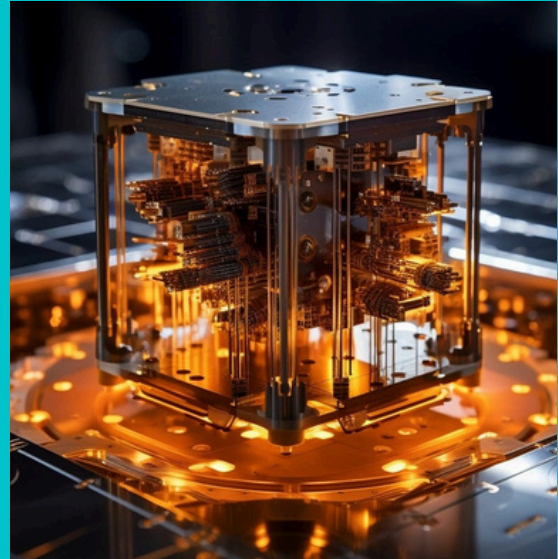
This trend extends beyond Google. A 2023 GitHub survey showed widespread adoption of AI coding tools, with 92% of U.S. developers using them in both professional and personal contexts. The majority of these developers (70%) believe AI coding assistance enhances their competitive edge by improving code quality, speeding up completion, and streamlining problem resolution. Additionally, over 80% anticipate that AI tools will boost teamwork and collaboration, underscoring the potential benefits of AI integration in software development.



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## QUANTUM COMPUTING

Quantum computing is a field of computer science that uses quantum mechanics to solve complex problems faster than classical computers. Quantum computers use quantum bits, or qubits, to process information. Qubits are made by manipulating atoms, electrons, or electrically charged atoms called ions. Quantum computers can represent multiple states at once because the bits are entangled.



Quantum computing has potential applications in diverse fields, including cryptography, optimization, drug discovery, artificial intelligence, and climate modeling. For example, it can break classical encryption methods, solve complex logistical challenges, simulate molecular interactions for pharmaceuticals, and enhance machine learning algorithms. Despite its promise, quantum computing faces challenges such as scalability, error correction, and high costs, as quantum systems are sensitive to environmental disturbances and require specialized conditions to operate. Currently, leading companies like IBM, Google, and Microsoft are making significant strides in developing quantum technology. Milestones like Google's claim of quantum supremacy in 2019 demonstrated the potential for quantum computers to outperform classical ones in specific tasks. While still in its infancy, quantum computing is expected to revolutionize industries and pave the way for innovations like a quantum internet and advanced secure communication.



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## EDGE COMPUTING

Edge computing is a distributed computing paradigm that processes data closer to its source, such as on devices or local edge servers, rather than relying on centralized cloud data centers. This approach minimizes latency, enhances real-time processing, and reduces bandwidth usage by handling data locally instead of sending it to a remote server. Edge computing is particularly useful in scenarios where rapid decision-making is critical, such as in autonomous vehicles, industrial automation, and healthcare monitoring devices.



Security and privacy are also significant benefits of edge computing. By keeping data closer to its source, the risk of interception during transmission is minimized, and organizations can better comply with data sovereignty regulations. Additionally, edge computing reduces costs by limiting the need for extensive data transmission to centralized clouds, which can be expensive and resource-intensive.

The rapid deployment of 5G networks is a major driver for edge computing, as 5G's low latency and high-speed connectivity complement edge devices, creating a robust infrastructure for applications like smart homes, wearables, and remote monitoring systems. Despite its advantages, edge computing also presents challenges, including managing distributed systems, ensuring consistency across edge and cloud environments, and addressing security vulnerabilities at the edge.

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