SWAMI VIVEKANANDA UNIVERSITY
EXCELLENCE. INNOVATION. ENTREPRENEURESHIP

NEWS LETTER

Volume-I, Issue-XI

Department of Computer Science & Engineering

Committee and Editorial Board

Department of Computer Science & Engineering

Computer Science serves as the foundation for various technological advancements that the world sees today. The field has grown by leaps and bounds. The future innovations that it brings along never seem to slow down. Yet another beauty of computer science is that it finds a place in many interdisciplinary fields as well. With these, there also comes a necessity to keep up to the global demand of finding highly skilled engineers and scientists. Swami Vivekananda University, one of the top-ranked t universities in India drives on the purpose of providing quality education and improving competence among students thereby living up to its motto, 'Progress Through Knowledge'.

Mission & Vision

The primary goal of a Department of Computer Science and Engineering is to advance knowledge and education in the fields of computer science and engineering. These departments are typically found to serve
various objectives, including:

Education: The department aims to provide high-quality education to students at various levels, including undergraduate, graduate (master's and Ph.D.), and sometimes postgraduate diploma programs. The goal is to equip students with a solid foundation in computer science and engineering principles, theories, and practical skills.

Research: One of the key goals is to advance the state of knowledge in computer science and engineering through research. Faculty members and students engage in cutting-edge research projects that lead to innovations, discoveries, and contributions to the field's body of knowledge. Innovation: Departments often foster an environment that encourages innovation and entrepreneurship. They aim to incubate new ideas, technologies, and startups that have the potential to address real-world problems and contribute to economic and societal progress.

Innovation: Departments often foster an environment that encourages innovation and entrepreneurship. They aim to incubate new ideas, technologies, and startups that have the potential to address real-world problems and contribute to economic and societal progress.

Technology Transfer: In collaboration with industry partners, the department may work on technology transfer initiatives, facilitating the application of research findings in practical settings. This can include licensing intellectual property or collaborating on industry-sponsored projects.

Professional Development: The department often focuses on the professional development of its students by providing opportunities for internships, co-op programs, and industry connections. The goal is to prepare students for successful careers in computer science and engineering-related fields.

The Department has state-of-the-art infrastructure and computing equipment supported by high-speed Ethernet and wireless networks. Our faculty members aim to deliver top-class education by blending their rich research experience with classroom teaching.

The students are motivated to participate in Curriculum, Co-Curricular, and Extra-Curricular Activities. They are encouraged to attend National, State, and international Workshops and Conferences to enhance their knowledge. Students are also encouraged to attend Value-Added Courses and do mini projects on new technologies to bridge the gaps between the curriculum, industry needs, and the software development process.

We are overwhelmed by the response that we received from students, faculties and staff in making this newsletter possible. In this newsletter, we have reported different activities – departmental success in Internal Smart India Hackathon 2024. We would like to also thank Dean of Science and Program Coordinators and other faculty members for providing information and valuable suggestions. I hope you will enjoy reading this issue!!!

What is in Next Issue?

Departmental faculty members' publications, such as journals, Conference proceedings, Book chapters, etc., will be available starting in the next issue.

ICSRD: CSE Story

The School of Engineering successfully organized ICSRD. CSE faculty and students attended the conference, presented their papers, and received certificates. Following are some glimpses.

Patent Publication

Prof. Somsubhra Gupta, Professor and Dean of Science, Department of Computer Science and Engineering, School of Computer Science, SVU, filed up a patent along with his associates which has been published at The Patent Office Journal.

The invention relates to a compiler system featuring an integrated auto-debugger module designed to enhance the debugging process by automatically detecting and correcting syntax errors in source code. The compiler system includes a traditional compilation module and an innovative auto-debugger module. Upon detecting syntax errors, the auto-debugger module receives the erroneous source code and analyzes it using a database of keywords and partial matching techniques. It applies statistical methods to resolve errors with multiple potential corrections, selecting the most probable fix. The corrected source code is then returned to the compilation module for further processing. This approach automate error correction, reduces manual debugging efforts, and improves the overall accuracy and efficiency of the compilation process.

---

(12) PATENT APPLICATION PUBLICATION (21) Application No.202431056805 A
(19) INDIA
(22) Date of filing of Application :26/07/2024 (43) Publication Date : 09/08/2024

(54) Title of the invention : "SHARP: A Compiler incorporating Auto-debugger with Floating Point Arithmetic and Variable Length of Data"

(51) International classification	:G06F0008410000, G06F0011360000, G06F0040232000, G06N0005040000, G06Q0030000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)Name of Applicant :
  1)Swami Vivekananda University
    Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----------- -----------
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
  1)Somsubhra Gupta
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------
  2)Chayan Paul
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------
  3)Jayanta Chowdhury
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------
  4)Pradip Sahoo
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------
  5)Aniket Dey
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------
  6)Manish Dubey
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------
  7)Biswajit Chatterjee
Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -------

(57) Abstract :
The invention relates to a compiler system featuring an integrated auto-debugger module designed to enhance the debugging process by automatically detecting and correcting syntax errors in source code. The compiler system includes a traditional compilation module and an innovative auto-debugger module. Upon detecting syntax errors, the auto-debugger module receives the erroneous source code and analyzes it using a database of keywords and partial matching techniques. It applies statistical methods to resolve errors with multiple potential corrections, selecting the most probable fix. The corrected source code is then returned to the compilation module for further processing. This approach automates error correction, reduces manual debugging efforts, and improves the overall accuracy and efficiency of the compilation process.

No. of Pages : 17 No. of Claims : 10