Teaching Statement

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Addressing the problems related to modern computer science requires both of the traditional roles of the professor- Researcher and Educator. Researchers discover solutions and propose techniques to address the challenges that face our field, but it is not enough to solves these problems in isolation- it is only through teaching that a new generation of computer scientists will recognize the challenges that exist in computer science, learn how to apply the knowledge acquired in their university courses to such problems, and discover new and innovative solutions of their own. Through teaching and outreach, I hope to inspire new generation of engineers, scientists and innovators.

Good Teaching can have a Far-reaching impact. I strive to be the type of educator whose classes I have been excited by, and who have motivated me to pursue research. My teaching philosophy has been shaped by my experience as both a student and an instructor, as well as the realities of the rapidly growing field of computing. Rapid advances in field of computer science requires that the students become adaptable, learning both the core principles of computer science and skills that are relevant to and competitive in today's job market. It is not sufficient that students memorize a static set of skills; students must also gain hands-on experience with real-world problems and discover how to apply the knowledge learned in lecturers to solve them.

I have had the opportunity over the past several years to put my Teaching Philosophy into practice in a variety of courses regarding Networking and Telecommunications, Software Engineering, Data Science, Artificial Intelligence, Programming, Communications, Cloud Computing, Algorithms and Optimizations, Distributed Systems, Internet of Things, Cyber Security and many others at some Institutes and Universities. In these courses, I have shaped Assignments, exams and lectures around this philosophy:

- **I have regularly shaped course projects around a realistic development experience, with each subsequent assignment building on previous efforts. This approach has given students hands-on experience with strong exposure towards real-time case study solutions, skill enhancements, problem solving and thinking towards research to solve problems in near future.**
- **Rather than basing assignment and test questions around recitation of material, I instead design them as open-ended projects of course knowledge to realistic problems and case examples. Students are allowed a larger degree of freedom in**

design and implementation of projects by solving real-time problems. These assessments provide sound engineering principles while challenging students creativity, individuality, and problem-solving abilities.

- **Lectures are routinely paused to present students with challenge problems, designed to allow students to internalize and put course topics into action.**
- **I have always focused towards Curriculum Upgrades and setting the lectures and assignments towards current trends and techniques in both academia and industry for making students towards enhanced thinking capability and sharpen the skills for Placements.**

My education vision is designed to provide the foundational knowledge required to develop and design solutions by being Relevant, Attractive and Connected:

- **Relevant to enhance the future of my students and making them Strong Engineers of the future. A solid education in the fundaments of computers science and hands-on experience with problems in the field will prepare students for the challenges in the workplace and inspire them to become lifelong learners.**
- **Attractive to make them Knowledge Hungry to explore and learn more philosophy through content and finally to discover new techniques with objective of "Lifelong Learning".**
- **Connected to Industry, Research Organizations and Governments through partnerships and integrated activities like Industrial Visits, Industry Professional Linkups and Joint Projects Execution.**

My primary Teaching Missing is to keep the courses relevant by regular teaching material updates to cover new trends and techniques in industry and research, while maintaining a solid education in the fundaments of the courses. Students must develop a solid understanding of the cornerstones of Networking and Communications, Software Engineering, Artificial Intelligence, Cloud Computing, Distributed Systems, Cyber Security, Internet of Things, Communications, Data Science etc., but new techniques and discoveries can be disseminated to the students in terms of these fundamental concepts. I will always strive to prepare students to answer the questions "How does it work?", "Why does it work", and "Where does it work"?. By answering these questions, students will be well equipped to learn, evaluate, and use tool and techniques that are relevant in today's world as well as those that emerge in the future.

I aim to keep courses attractive through my passion for teaching and by covering the material in an engaging manner. In many areas, computer science is a practical subject--and, as a result, some of the courses are seen as less interesting—but with proper instruction, all aspects of our field can be engaging and inspiring. Lectures should be grounded in realistic case examples and students should be given opportunities to apply the lessons through in-class active learning activities. Students should work in groups to develop an understanding of the humans' aspects of development and to encourage collaborative learning. Ultimately, it is my primary and strong responsibility to provide the right classroom environment to best teach the principles of computer science, and it is my aim to keep students interested through engaging delivery of lectures and hands-on exercise.

My teaching style has been well received by the students and comments received on my LinkedIn and other Online Networks are as follows:

- **Most Interactive and Innovative Educator in Computer Science and has strong potential and keep the students engaged.**
- **I enjoyed his class every time, really inspiring and making me think out of the box and predict the future and motivates me for problem solving.**
- **Very Effective teacher in explaining tough concepts in so simple manner, that I always like the lecture like anything else.**

Finally, I aim to keep courses connected to Industry and other professional organizations requirements. I regularly invite Industry Professionals in my class to interact with students, give them add on knowledge and hone their skills towards effective outcome of problem solving.

Apart from Teaching, I enjoy myself of becoming mentor and keep the students engaged in regular competitions like Hackathons, Code-Spirit, Developer IO and other industry events.

- **I have advised students with their research, educated them in areas that I am knowledgeable in, worked with them to develop their research and writing skills, and helped them meet their academic progress goals.**
- **I have taken opportunities to give Online Lectures in form of Webinars, Faculty Development Programs of Research Methodology, and other topics of Computer Science with Hands on experience.**
- **I have actively engaged myself in organizing Conferences Sponsored and Funded from Springer, ACM, IEEE and connect research professionals in ongoing activities.**

To summarize, I believe strongly that Teaching empowers everything, and I view teaching, as an integral part of my soul. I am passionate about inspiring young engineers and aim to produce Engineers who not only understand diverse technologies of computer science but can apply their knowledge to problem solving and build a community of strong experts.

Teaching Interests

I am interested to teach wide Variety of courses at Both Bachelor and Masters Programs like: Networking and Communications, Artificial Intelligence, Internet of Things, Cloud Computing, Blockchain, Cyber Security, Operating Systems, Distributed Systems, Software Engineering and Testing, Programming, Algorithms and Optimizations, Data Structures and Open-Source Technologies.

In addition to this, I am also interested to guide Ph.D Students for undertaking Specialized subjects belonging to their research and guiding towards Research Methodology, Scientific Papers Publications and Performing Literature reviews.

Teaching Accomplishments

- **18+ Teaching, Research and Consultancy experience with Arya College, KLSD College, KCLIMT and Duy Tan University (Presently Serving) with hard core results of 100% in Teaching and Guidance of Projects.**
- **125+ International Certifications from Microsoft, CISCO, Oracle, Google, GAQM, EXIN, Beingcert.com, Cyberoam, Asian School of Cyber Laws, EC-Council.**
- **48+ Awards for contributions towards excellent teaching and scientific activities.**
- **Delivered more than 150+ Invited Talks in Top Tier Institutes on diverse topics of Computer Science for Students and Faculty Development.**
- **Attended more than 20+ Faculty Development Programs on varied IT topics for knowledge enhancement.**
- **Guided 1 Ph.D, 7 M. Tech, 2 M.S., 30 MCA Students for Capstone Projects / Thesis.**
- **Published 60 Books in Computer Science with Renowned Publishers like Springer, Elsevier, CRC Press, BPB Publications, Wiley.**
- **Visiting Scientist cum Scientist to Kyungpook National University, South Korea; Maryam Abacha American University of Nigeria, Maaun Kano and Gautam Buddha University, India. Advisory Board Member to Management Studies, SR University, Anantasagar, Hasanparthy (M, Telangana 506371, India and Board of Studies Member to Center for Research and Development (CFRD), Sri Eshwar College of Engineering, Coimbatore, India.**