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Plenary Panel Session at CSEE&T 2016

How Much Software Engineering We Can Teach for K-12 Students?

Moderator:
John Cole, University of Texas at Dallas

Panelists:
Jey Veerasamy, University of Texas at Dallas
Ravi Calyanakoti, Nokia
Uttam Dravidam, AT&T
Allen Selis, Tech EdVentures

Abstract

It is good to see that teaching CS in schools is finally gaining momentum. While Elementary and middle school students will likely be introduced to CS through graphical learning tools like Scratch, Alice, GameMaker and MIT App Inventor, they are introduced to free-form typing using the popular languages (JavaScript, C++, Java and Python...) in AP Computer Science courses in High School. Such students do need to code quite a bit and work on complex projects to appreciate the Software Engineering principles. Are the high school students really ready to take this much of coding? Does it really make sense to teach Software Engineering in high school? Which approaches make sense?

About the panelists

John Cole is a senior lecturer in Computer Science at The University of Texas at Dallas. His interests include user experience design, embedded systems, software engineering, and CS education. He is the faculty sponsor of the student ACM chapter and mentors Senior Design projects. Before coming to UTD, John had a long career in the software industry, including nearly 30 years running a small company. Products included a compiler for programming language PL/B, a CRM system used by Compaq and 3Com, a computer telephony integration server, and many more, as well as custom software for companies such as Blue Cross, Mary Kay Cosmetics, and Lakeside Oil Co.

Jey Veerasamy works as the Director of Center for Computer Science Education & Outreach and also as teaching faculty in Computer Science at the University of Texas at Dallas. He has worked in wireless telecom software for 16 years and joined UT Dallas in 2010 to focus more on teaching

which is his passion. Dr. Jey organizes AfterSchool Coding Clubs and Summer camps for school students to learn programming in enjoyable manner, touching the lives of 1000s of school students every year.

Ravi Calyanakoti works as an Innovation Coach for Nokia in AT&T Foundry. He is responsible for understanding new technologies and bringing innovative solutions to AT&T. He has worked in the telecommunication field for the past 20 years with varied experience in architecture, design, development and integration of software and services. He has worked in emerging technology areas like voice over IP, next generation wireless, cloud, virtualization and open source software. As part of Nokia Foundation community outreach program, he develops and teaches STEM/STEAM courses on programming in various DFW area schools. He has a BS degree in Computer Science from National Institute of Technology, India and MBA from University of Texas at Dallas.

Uttam Dravidam works as Sr. Technical Director at AT&T, his team is responsible for delivering AT&T Integrated Cloud (AIC). AIC is a unified cloud platform for both internal and external AT&T (services). AIC leverages open source OpenStack components along with multiple hypervisors, middleware and OS environments in a variety of physical locations to provide enterprise grade cloud services. And Uttam also serves as National President-Elect of OASIS (Organization of Asian Indians at AT&T) one of the 12 Employee Resource Groups at AT&T. In his spare Uttam taught MIT app inventor to over 600+ Middle/High School students in DFW area which were held in Plano libraries and several ISD's.

Allen Selis is the Founding Director of Tech EdVentures, a Dallas based startup that teaches coding and engineering skills to young learners from 5 - 15 years of age. Dr. Selis has over twenty years of experience in primary and middle school education and specializes in the development of curricular methods that make coding and engineering accessible to new students. Prior to founding Tech EdVentures, Dr. Selis served as the headmaster of a private school in Silicon Valley.