Openness – what it means for academics

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Microsoft

What is openness?

Open research

      attending conferences, collaborating, internships

      easy to find on a website e.g. research.microsoft.com

Cross platform software

      Virtual machines on the cloud e.g. Azure

      Browser-based implementations e.g. Rise4Fun, Touchdevelop

      Software as a service

Open source and free software

      … next …

More about open source software

Popularity	Reliability	Adaptability
Security	Independence	Cost of ownership

Open source in action

Use it

Everywhere because of the perceived value

Plus: it is often cross-platform

Change it

In capstone projects
- Students want to get their hands on real software
- They like to collaborate

In research
- Small components are added to save time
- Studies are done on how people work and program

Carnegie Mellon University
School of Computer Science

Software Helps Create Sign Language Dictionaries, Voice-Activated Games for the Hearing Impaired

Carnegie Mellon Students Develop Open Source Tools With Bangalore School

BY BYRON SPICE - TUE, 2015-09-15 13:08

Carnegie Mellon University's TechBridgeWorld research group today announced the release of open source software that can help educators of children with hearing disabilities create video dictionaries of sign languages and use games that encourage vocalization by children learning to speak.

The software, produced in collaboration with the Mathru Educational Trust for the Blind in Bangalore, India, is particularly suited for use in underdeveloped countries where educational resources for children with disabilities are often in short supply.
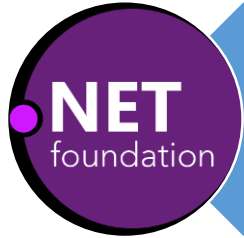
CMU students and 2015 iSTEP interns Erik Pintar, Minnar Xie, Maya Lassiter and Amal Nanavati.

Open Source at Microsoft

Microsoft uses, produces and adds to OSS extensively

We offer key company software such as DotNet and cryptography

30+ domain specific research tools, categorized in a portal

openness.microsoft.com/blog/
www.microsoft.com/opensource
research.microsoft.com/opensource

MS supports OSS

- These and many other platforms and tools are available via VMs on Azure

- Academics and classes get free access to Azure

- A movement of openness

microsoft.com/openness

Microsoft Research offers

Tools for specialized domains

Connections to researchers

Project Directory Categories		
Verification	Cryptography	Visualization
Programming	Cloud Computing	Education
Artificial Intelligence	Hardware	Systems
Science	Documents	Society

Open Source Software from Microsoft for Academics

Always open. Often cross platform. Try it.

Open source is a powerful way of advancing software development and sharing data for experimentation. Microsoft has open sourced research projects as well as key software such as the .NET Core. Academics are especially invited to explore the software listed here, use it their classes and research, and join in adding code to make the projects better. Our repositories contain many projects and tools. This website is a guide to those that are active and have leaders wishing to engage with academics right now.

Return to this website regularly to see new projects and announcements for collaboration.

Showcased projects

TPM Software Stack
for accessing TPM security components

Z3 Theorem Prover
for analysis, testing, and verification

.NET Core
for experimenting with real operating systems

Getting started

Microsoft Research blends software development with cutting edge research. In the Project Directory below, each project links to a website where there will be information and papers. After reading about the project, you can try out the software by downloading it from one of our repositories—GitHub, CodePlex, the Microsoft Research website, or the .NET Foundation. Then start looking at the source and adding to it.

Example Projects

Use Madoko for beautiful professional writing in the cloud
www.madoko.net

Decision forests are used in scene recognition from photographs to radiological scans
research.microsoft.com/decisionforests
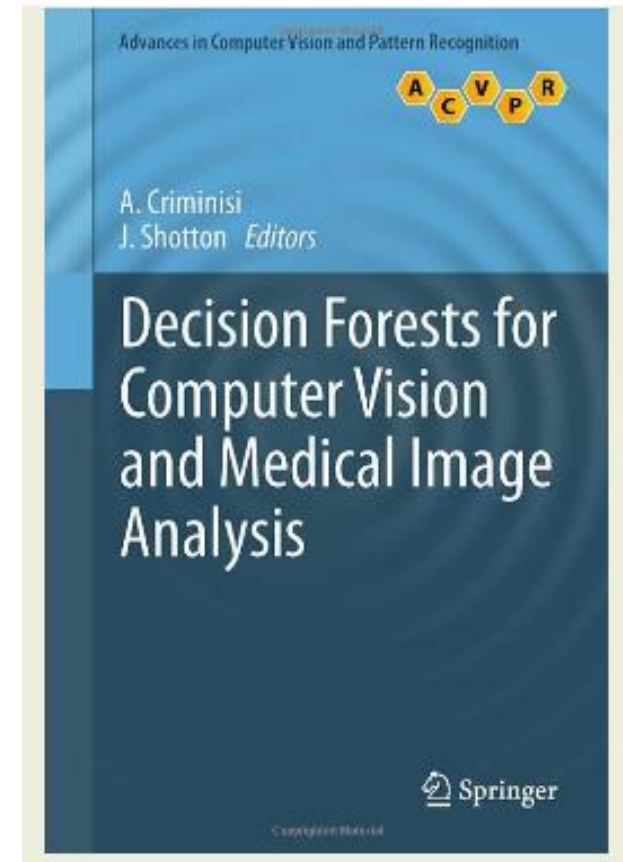
Questions?

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