Syllabus - CS 6150, Computing for Good

**UNDER CONSTRUCTION**

**Introduction**

Computing for Good (C4G) provides students from various backgrounds the opportunity to gain skills related to social good tech projects. The computing for good domain involves a variety of topics including pre-deployment considerations, architecture, deployment, and sustainability.

Students will explore C4G through the creation and deployment of a semester-long project, created either individually or through a team. Projects are chosen by each student and/or team. In the past, these have included topics such as hunger, peace, homelessness, climate change, social justice, etc. Teams may choose their own tools, e.g., Swift, Dart/Flutter, PHP, MySQL, Java, HTML, etc. Case studies of projects, successful and failed, accentuate the team project.

**Objectives**

The course’s primary objectives are~~:~~

* To provide exposure to the tools required to execute a C4G project
* To develop an appreciation of the components and factors leading to both successful and failed C4G deployments
* To gain an understanding of the domains that can benefit from C4G projects based on best practices

**Topics**

Selected topics include:

* Toyama’s Law of Amplification
* Technology myths
* The danger of quick fixes
* Technocratic orthodoxy

**Assignments/Deliverables**

* Weekly Progress Report (during Project Period)
* [Mid-Term](assignments.docx): Sunday 10/10/2021 11:59 PM (Fall Break: 10/11-10/12/2021)
* [Team Project](assignments.docx): Sunday 12/9/2021 11:59 PM (Finals: 12/9-12/16/2021)
* [Test Canvas Site](https://gatech.instructure.com/courses/221674) (requires Canvas login)

**Miscellaneous Information**

* [Academic Calendar](https://registrar.gatech.edu/calendar)

**Text**

* [Geek Heresy: Rescuing Social Change from the Cult of Technology](https://www.amazon.com/Geek-Heresy-Rescuing-Social-Technology/dp/161039528X) – Kentaro Toyama (Lesson 4)

**Papers**

* [C4G BLIS: Health Care Delivery via Iterative Collaborative Design in Resource-constrained Settings](https://dl.acm.org/doi/abs/10.1145/2909609.2909657) – Vempala et al (**Lesson 2**)
* [Understanding Sociotechnical Implications of Mobile Health Deployments in India, Kenya, and Zimbabwe](http://itidjournal.org/index.php/itid/article/download/1440/1440-4047-2-PB.pdf) - Kumar et al (**Lesson 5**, correct paper?)
* [Baby steps: evaluation of a system to support record-keeping for parents of young children](http://aiweb.cs.washington.edu/research/projects/aiweb/media/papers/paper1399-kientz.pdf) – Kientz, Arriaga, Abowd (**Lesson 8**, correct paper?)
* [ICT4D 2.0: The Next Phase of Applying ICT for International Development](https://ieeexplore.ieee.org/abstract/document/4548169?casa_token=HG9r-PBXY5UAAAAA:hUFTRND5OGVrbz7zADS1Zxy7dgHYMr41u6_YdB428M-HnXCEzXv00ToBwara9qzXS_zcZ5oC) – Heeks
* [Information Systems and Developing Countries: Failure, Success and Local Improvisations](https://www.tandfonline.com/doi/abs/10.1080/01972240290075039?casa_token=3WkY2zrlPRAAAAAA%3AbPx9qWKjw0wLa6ropZQBwSkqN25Jg0oh50ofHXskezo42y-4kwtc7Q-caV6BWVTQeGdxUtgAS6Im&) – Heeks
* [Design and Deployment of a Blood Safety Monitoring Tool](https://www.cc.gatech.edu/fac/vempala/papers/ICTD09.pdf) – Thomas, Osuntogun, Pitman, Mulenga, Vempala (also [here](https://ieeexplore.ieee.org/abstract/document/5426674))
* [Sustainability Failures of Rural Telecenters: Challenges from the Sustainable Access in Rural India (SARI) Project](https://smartech.gatech.edu/bitstream/handle/1853/48574/Sustainability Failures of Rural Telecenters Challenges from the Sustainable Access in Rural India (SARI) Project.pdf?sequence=1&isAllowed=y) – Best and Kumar (**Lesson 12**)

**Slides**

* [Ten Myths of ICT4D](https://gtvault-my.sharepoint.com/:p:/g/personal/dciolfi3_gatech_edu/Ef3uUDZ3UGJCl9rqLa74G6EByoXRTVSsljBuzL4kvKFieg) – Kentaro Toyama (Lesson 4, slides are on Dante’s OneDrive)