

## CS-Specific\* tools and stuff for teaching online, geared towards programming, scraped from lots of places

\*also some general stuff further

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### Online IDEs (all free or freemium)

- <https://www.onlinegdb.com/> (C, C++, Python, PHP, Ruby, C#, VB, Perl, Swift, Prolog, Javascript, Pascal, HTML, CSS, JS, Interactive terminal, can save work with free account, no ads, available in China, forking, debugger).
  - **I moved to this from coding ground (below) for intro programming.**
- [repl.it](https://repl.it) (~50 languages?, Interactive terminal, freemium, all work in free version is public, not available in China, GitHub integration)
- [ideone.com](https://ideone.com) (~60 languages, not terminal interactive but does STDIN I/O, ad driven, China?, forking)
- Coding ground: <https://www.tutorialspoint.com/codingground.htm> (~75 languages, not terminal interactive but does STDIN I/O, ad driven, can save work with free account, available in China, forking)
- <https://clin.icourse163.org/> (at least C and C++, interactive terminal, appears to save work, free, Chinese interface)
- Python Tutor by Philip Guo @ UC San Diego: <http://pythontutor.com/> (Python, Java, C, C++, Javascript, Ruby). Pretty unique, free, heavy on visualisation, volunteers on hand to provide live help! Pretty sure this is available in China.

### Other tools mostly for code, code submissions, etc. Mostly commercial, most free to some extent, others often integrated with ebooks, autograders, plagiarism detection, etc.

- MOSS (the more or less de-facto code plagiarism detection tool from Stanford) free, highly customisable with scripts, etc.: <https://theory.stanford.edu/~aiken/moss/> Not Commercial. Built by CS educators for CS educators. Around since 1994.
- Code Post (<http://codepost.io/>), free for higher-ed use, autograding, multiple languages, built-in MOSS, featured in a SIGCSE workshop last week: <http://bit.ly/cP-SIGCSE2020>, **I have played with this. Seems pretty good.**
- Github classroom (free for educators) <https://classroom.github.com/> more or less an assignment tracker / submission tool (but a little more).
- Codio ([codio.com](https://codio.com)) (free for Covid-19), Autograder, IDE, etc.
- Turing's Craft ([turingscraft.com](https://turingscraft.com)) Covid-free, programming exercise system for runign online labs.
- Gradescope (part of TurnItIn) <https://www.gradescope.com/>: "Gradescope streamlines the tedious parts of grading paper-based, digital, and code assignments while providing insights into how your students are doing".
- Mimir <https://www.mimirhq.com/>: Submission tool, supports many languages, Built-in plagiarism and unit and I/O testing.
- Wiley (free for Covid-19) access to Knewton and Wiley Plus: <https://secure.wiley.com/COVID19OpenWPAccess>
- ZyBooks [zybooks.com](https://zybooks.com): (free for Covid-19) ebooks, autograding platform (supports many languages including MATLAB)

## More CS Specific stuff

- From Jennifer Kay @ Rowan U – resources for specific CS textbooks OR videos you can reuse (specific to CS) – also includes MATLAB
  - If you know of video lectures that might be useful to the community, please add them to this repository by filling out this form: <https://forms.gle/Q47QbxpUEESBNVfx6>
  - You can view the list of what's been submitted here: <https://tinyurl.com/csonline2020>
- Online Resources For Specific Computer Science Textbooks:  
<https://docs.google.com/spreadsheets/d/17GBSLkNicCavoYPDDIE0hennikKFK-PvoKtxJQrGJk/edit#gid=754751182>

## Video and miscellaneous tools

- Open source video editor <https://shotcut.org/>
- TechSmith Snagit Screen Capture & Screen Recorder (free for COVID-19 through June 30, 2020) <https://discover.techsmith.com/remote-techsmith>
- How to set up Docker within Windows System for Linux (WSL2) on Windows 10:  
<https://www.hanselman.com/blog/HowToSetUpDockerWithinWindowsSystemForLinuxWSL2OnWindows10.aspx>

## General “going online” stuff

- Forbes article with dozens of Covid-free resources from Adobe Connect to Microsoft to Zoom: <https://www.forbes.com/sites/martingiles/2020/03/19/free-software-for-businesses-and-schools-covid19/>
- **HUGE spreadsheet of resources from hundreds of universities on remote teaching** (many geared for emergencies/rapid response/Covid): [bit.ly/rtresourcelist](http://bit.ly/rtresourcelist) Submit your resources here: [bit.ly/rtresourceform](http://bit.ly/rtresourceform) Maintained by Daniel Stanford @ DePaul U
- Google Learn at Home: <https://learnathome.withyoutube.com/>
- Google Teach from Home: <http://g.co/teachfromhome>
- **Teaching Effectively During Times of Disruption** from Jenae Cohn and Beth Seltzer @ Stanford: [bit.ly/stanfordteachingdisruption](http://bit.ly/stanfordteachingdisruption)
- Purdue University
  - <https://www.purdue.edu/innovativelearning/supporting-instruction/portal/>
  - <https://www.purdue.edu/innovativelearning/teaching-remotely/>
- Link to Stanford Google Doc (detailed):  
[https://docs.google.com/document/d/1ccsudB2vwZ\\_GJYoKIFzGbtmftGcXwClwxzf-jkkoCU/preview](https://docs.google.com/document/d/1ccsudB2vwZ_GJYoKIFzGbtmftGcXwClwxzf-jkkoCU/preview)
- Vanderbilt: <https://cft.vanderbilt.edu/resources-for-just-in-time-online-teaching/> - includes Brightspace info
- From Michael Ball @ Berkeley (guide to synchronous remote teaching tools)  
<https://docs.google.com/document/d/1BegghqpCDo8YjZr9nIH5qN49GO8ssgwZSVKQt2Pp4d/edit?usp=sharing>
- AWS, IBM launch programs to encourage developers solving COVID-19 problems (TechCrunch) <https://techcrunch.com/2020/03/20/aws-ibm-launch-programs-to-encourage-developers-solving-covid-19-problems/?guccounter=1>