

# Vocational Training in Coding and Computer Science

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**Matt Harris, Ed.D.**

International Educational Consultant, *International EdTech*

[matt@internationaledtech.com](mailto:matt@internationaledtech.com)



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presentation  
<https://edtch.co/2DD0M3c>

# My Background

- International EdTech consultant
  - Leadership consultation
  - EdTech planning and evaluation
  - Digital Citizenship
  - Training  
<http://internationaledtech.com>
- 3 Degrees:
  - B.S. in Computer Science
  - M.A. in Education
  - Ed.D. in Educational Leadership
- Taught all grade levels PreK to Grad School
- Former Chair of the ISTE Board
- Blogger, Vlogger, Presenter on EdTech  
<http://mattharrisedd.com>
- Twitter: [@mattharrisedd](https://twitter.com/mattharrisedd)
- Current Project:  
**Blueprint for Technology in Education**

28 September 2018

“We help all schools use technology successfully.”

CLIVE THOMPSON IDEAS 02.08.17 12:30 PM

# THE NEXT BIG BLUE-COLLAR JOB IS CODING



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<https://edtch.co/2DvXWNc>

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Matt Harris, Ed.D. :: [edtch.co/2DD0M3c](https://edtch.co/2DD0M3c) :: [@MattHarrisEdD](https://twitter.com/MattHarrisEdD) :: [matt@internationaledtech.com](mailto:matt@internationaledtech.com)

International EdTech

# Agenda

- Define "Coding"
- Look at Coding work
- Global need for coders
- How do we train coders?
- Next steps...



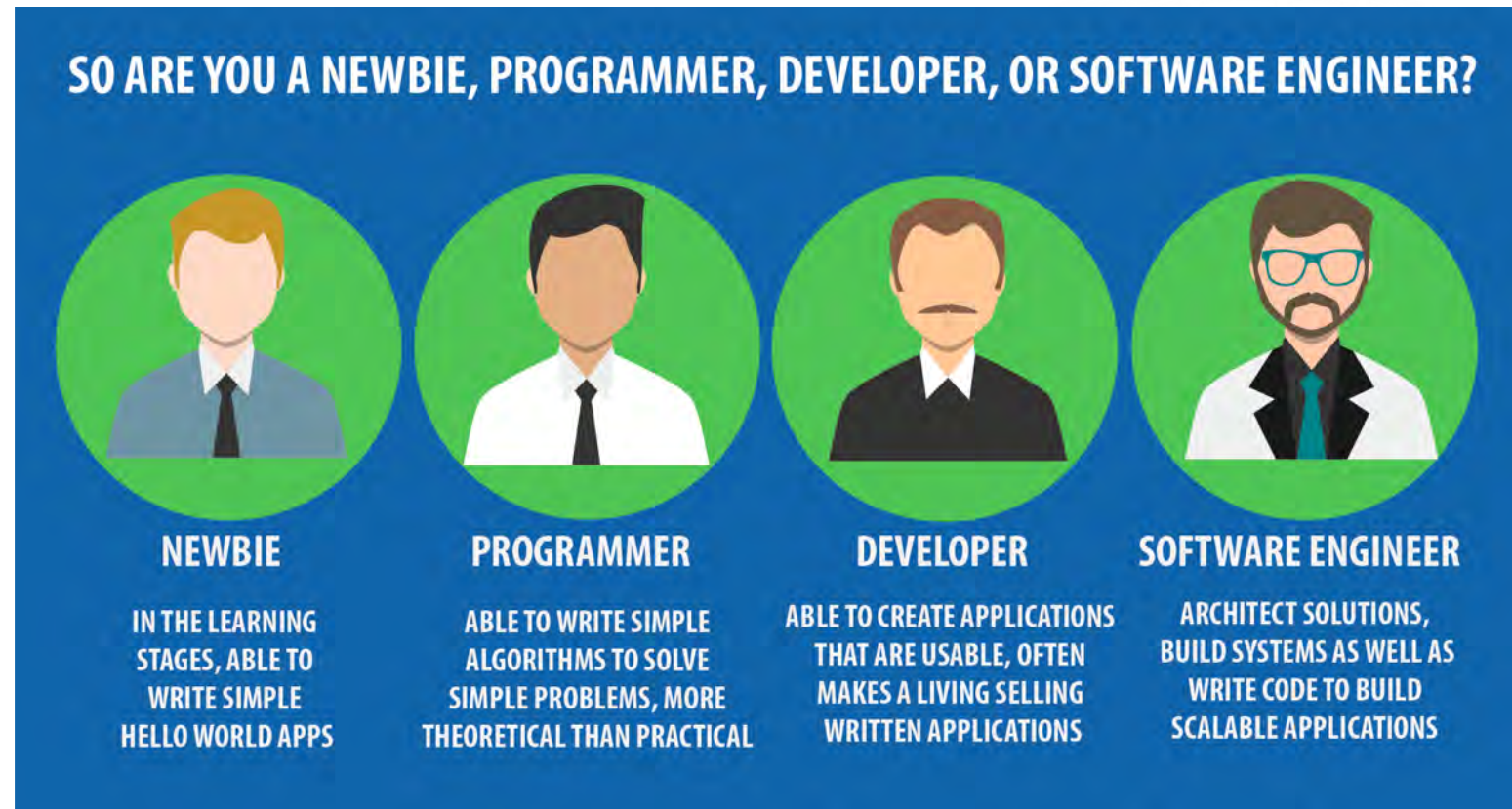
AGENDA



# Let's start with some definitions

- CODER or PROGRAMMER
  - Author's computer code
  - Write's computer programs
  - Follow's requirements documentation, instructions, or algorithms to guide the authoring of computer code or programs
- SOFTWARE ENGINEERS
  - Design computer programs, system architectures, algorithms, and requirements documents.
  - Manage coders
  - Author's computer code

# Coder vs. Software Engineer...and everything in between





Software Engineer



Coders / Programmers



# 10 Computer Science Jobs Available Right Now

Please visit:

<https://edtch.co/2NMrZoM>

# From BSD Learning

- Where do you see the market for coding and vocational education? How big is the need?

The British Chambers of Commerce has said that labour and skills shortages are likely to be the biggest challenge that firms face this year. At the same time, numerous employers globally have argued that students are starting employment without the competencies they need to succeed. This is particular the case for digital skills.

This shortage of skills is happening at the same time as demand for these skills is growing. Employment of computer and information technology occupations is projected to grow 13 percent from 2016 to 2026, faster than the average for all occupations.

(<https://www.bls.gov/ooh/computer-and-information-technology/home.htm>)

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## From BSD Learning (cont'd)

Vocational education has great potential for helping to fill these skill gaps, which is why BSD is focusing on creating a more vocational course that can help students prepare for a digital future. By combining skills focused learning and work experience, students not only get the opportunity to develop the skills employers are looking for but also get to put these into practice in real world scenarios, build relationships with employers and develop the softer skills required in the working world.

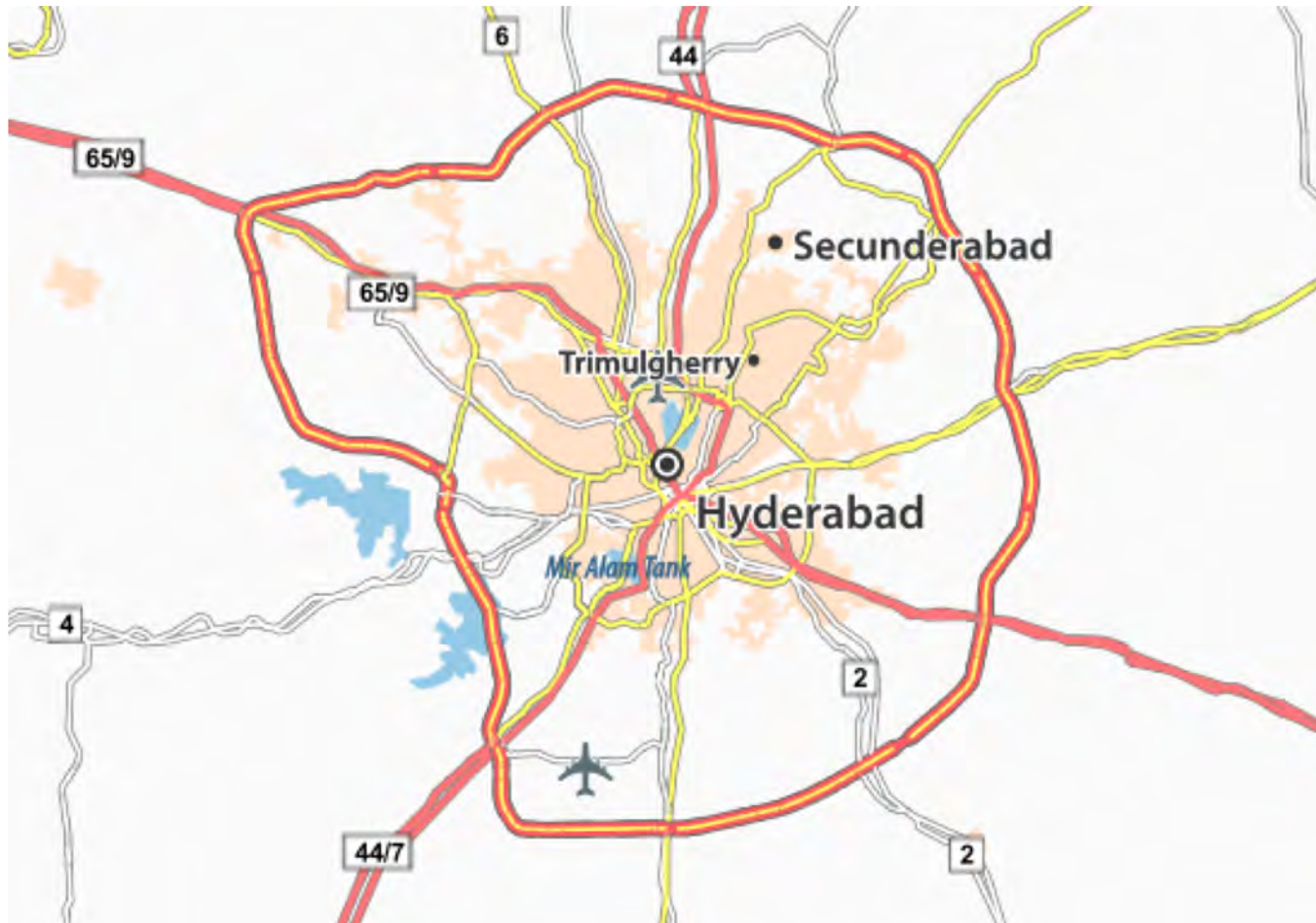
<https://app.bsd.education/>

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<http://www.upwork.com>





# How do we offer vocational education for programming?

- School's related training
- University education
- Internships
- Vocational/job skills training
- Code Camps
- Online tools



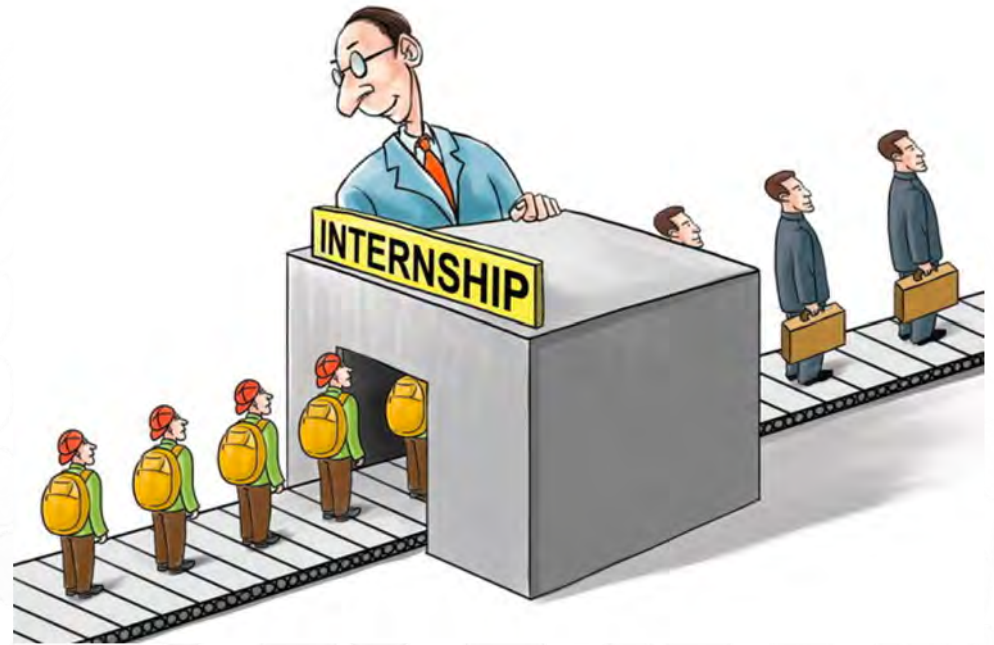
# School or University Level Training

- School
  - Coding as a skill taught in lessons
  - Vocational training like machine work or shop class
  - Coding clubs
  - Hack-a-thons
- University Level Training
  - Polytechnic education in coding
  - Computer science or software engineering degree
  - Continuing education courses



# Internship

- Work with a company as an entry level employee
- Learn on the job
- Do real work that is “shipped”
- Paid vs. unpaid
- CV/Resume development
- Mentors, experts, real programmers





# Vocational Training or Job Skills Development

- Formal training in coding
- Run by educators and coding experts
- Shorter time frames than formal programs
- Focus on applied skills to solve problems
- Usually specialize in a coding field or language
- Career and job placement usually included in the package



# Online Coding Academies

- Online training academies that act like vocational training centers
- See Connect2Work

“BSD’s Connect2Work course is a career-related programme designed to train students in real world, transferable, digital and technology skills to make them employment and career ready. The programme achieves this through combining an in school project based curriculum with work experience.

Students completing the course will be both higher education and work ready and be able to use real world technology to solve real world problems. They will finish with a virtual portfolio on our learning platform BSD Online.”

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# Key Takeaways

- Coding is a career related skill that can be taught to students
- Coding jobs are PLENTIFUL
- Coding training has to be created by schools and industry
- IT CAN BE DONE...and it is being done.



# QUESTIONS? COMMENTS?

**Connect with me for further info:**

**Email:** [matt@internationaledtech.com](mailto:matt@internationaledtech.com)

**Twitter:** @MattHarrisEdD

**Learn more about International EdTech**

<http://internationaledtech.com>



## Links to the videos

- What is Coding - <https://youtu.be/sBARzKRGLoM>
- Google Internship - <https://youtu.be/mKCYCPT7X9Q>
- Tokopedia DevCamp - <https://youtu.be/IXVgSxgXQFg>