Student Research Experience on Software Test Automation and Quality Assurance

2019-2021(22?)

by Tomas Cerny

Agenda

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- ➢ Topics
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- ➢ Best Practice
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Intro

NSF Funding

Student research training abroad, with all the benefits of foreign travel. Pre-departure and post-return activities and follow-up.

..six U.S. undergraduate students with an eight-week summer research experience.. testing, quality assurance, and code-inspection of distributed software systems.. Czech mentors..

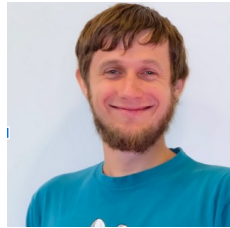https://www.nsf.gov/awardsearch/showAward?AWD_ID=1854049

Partners

Dr. Tisnovsky, Hursovsky / **Dr. Bures, Dr. Frajtak**

Project mentors, logistics

Topics

1. Code-clones, automated testing
   - 6 + 2 students
2. Log analysis
   - COVID -> Online
   - 9+4 students
3. (now) Mining-software repositories, anti-patterns
   - COVID -> Online
   - 6+4 students

22x peer-reviewed publication
2x mentor workshops
4x student research forums
2x DevConf
1x high-school workshop
1x high-school award

Annual schedule

1. Pre-departure (Jan-May)
   - Training, logistics
2. Showtime (May-July)
   - 1 month Prague (CTU) and 1 month Brno (RedHat)
3. Post-return
   - 3-credit research course
   - Independent topics

- COVID
  - Online-camp this year +3 extra volunteers
  - Egypt/Nepal/K12

Best Practice

- Start with searching for existing solutions
    - 2-3 weeks search research articles in ACM/IEEE/Springer/Science Direct
- Let graduate students to team lead
    - Mentors for undergrads
- Stand-up meetings
- Milestones
    - Team -> individual
- Publish!
    - Early reports

About the PI

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Q/A + FUTURE
(I LIKE TO WORK WITH YOU ON FUTURE PROJECTS)