Some notes as you complete your CSC internship proposal

- Make yourself aware of the deadlines and requirements of the Internship office: https://www.berea.edu/ctl/
- Any fields that are already prefilled are what the CSC department considers are REQUIRED by you; of course, you are welcome to do more than the minimum. Additionally, modifications can be made to the rest of the proposal, but only under extenuating circumstances (e.g., the internship starts late and you can't possibly produce some of the content that early). You are highly encouraged to discuss these constraints with your faculty sponsors when you meet with them.
- All deadlines are subject to change by the CSC faculty. However, the faculty will give you ample prior notice of changes so you can plan and prepare appropriately. We are more interested in quality content than rushed, poorly constructed content.
- CSC 395 should be used for:
    - Students who have **not** yet taken both CSC 236 and at least one 300+ level CSC course
    - Students who do not yet have senior status
    - Website content-generation or other IT work which is not at the CSC capstone level
- CSC 495 should be used for:
    - students taking their second CSC internship
    - students with senior status and multiple 300+ level CSC courses
    - an internship with a supervisor who has a depth of technical expertise in computing
- You should submit a digital copy of the final draft of your proposal to Moodle once you are enrolled.
- Please note that this year, your primary sponsor must be Jan Pearce. The following faculty are available to be secondary sponsors for you this summer. Others may be available as well. If you have ideas, discuss them with the CS department.

    - **Dr. David Guggenheim (BUS and MIS)**
      guggenheimd@berea.edu
      x 3928
    - **Dr. Scott Heggen (CSC)**
      heggens@berea.edu
      x 3141
    - **Dr. Peter Hackbert (EPG)**
      hackbertp@berea.edu
      x 3721

Internship Proposal for Academic Credit

Fall 2018, Spring 2019, Summer 2019

Deadline for submission to Office of Internships is
***April 16, 2019** for summer internships; or first day of classes for Fall and Spring terms.*
Proposal must be typed. This is a MS Word document; fields within the tables will expand as needed.

1. Student Information

Name: Samriddha KC	ID#: B00716992
E-mail: kcs@berea.edu	Phone: 859-979-2735
Class Level: Junior	Major: Computer Science and Mathematics
Address: 101 Chestnut Street CPO 795	City/ST/Zip: Berea/KY/40404

2. Internship Site and Supervisor

Provide complete, accurate information. This will be used for communication with your supervisor.

Organization Name: Morgan Stanley		Supervisor's Name: Stephanie Mondo
Address: 1585 Broadway		Supervisor's Title: Executive director at Morgan Stanley
City/ST/Zip: New York, NY 10036		Supervisor's Phone: 212-761-0149
County: Manhattan	Country: United States	Supervisor's E-mail: Stephanie.Mondo@Morganstanley.com
Is this a non-profit organization? No		

3. Pay Status and Hours

Will the organization be paying you? If yes, Amount per hour: $40.87 Amount of stipend: $14713.2(Without taxes)	Is the organization providing additional compensation? If yes, Type: Amount: $2000 (For living expenses)	
Starting date: June 3, 2019	Ending date: August 9, 2019	
Number of weeks: 9 *(minimum 8 weeks for summer)*	Hours per week: 40 *(35-40 hrs/wk for summer)*	Total hours:360

4. Course Information

Academic Department: CSC *(example: COM 395)* Course Number *(395, 395E, or 495)*: 395	# of Course Credits: 1
Course Title* *(limited to 25 characters)*: Summer Analyst Program: Morgan Stanley .	Term and Year: Summer 2019

5. Faculty Sponsors

Primary Faculty Sponsor *(Primary Sponsor must be from the Academic Department granting the credit unless otherwise authorized by the Department Chair)*	Optional Secondary Faculty Sponsor *A Secondary Sponsor is not required for most internships, although it may be specified as a requirement by your department or program (EPG, Shepherd, etc.).*
Name: Jan Pearce	Name:
Dept: Computer Science	Dept:
E-mail: pearcej@berea.edu	E-mail:
Phone: 859-985-3569	Phone:

6. Describe your internship position briefly *(functions, duties, projects, etc)*.

To design, develop, and maintain applications used by Morgan Stanley's business units. Daily activities will include meeting with clients to gather and analyze requirements. Based on analysis, will be tasked to make system design decisions, evaluating, integrating, and developing necessary software and then testing and deploying application to production.

7. What are your learning objectives for this internship? *(specific, measurable, achievable)*

- Apply concepts from my CS curriculum in a non-academic setting
- Formulate and express a personal understanding of a modern work environment and how it relates to my personal career goals
- Use oral communications skills to present complex ideas at the appropriate level for a specific audience
- Use my written communications skills to present complex ideas at the appropriate level for a specific audience
- Connect with high profile employees at one of leading firms in the world who can possibly act as mentors for my career as a software developer.
- Understand the work environment in a competitive environment which could help me decide about whether to leverage my computer science and mathematics skills in industry or academia after graduation.
- Learn to develop high-performing, low-latency electronic trading systems, and evolving complex workflows in a limited amount of time.
- Learn how programming languages such as C++ development and Python programming is important to maintain a quality trading system in financial firms.
- Learn to debug large systems using efficient debuggers like gdb, g++, and pdb.
- Learn to meet expectations and write quality industry standard code.
- Get used to the habit of commenting every 30 minutes I start coding to avoid writing confusing code and be clear and concise with my coding solutions.
- Gain experience in reading and reusing code from different sources as previous coding experiences has made me realize this to be an essential skill.

8. How does this internship relate to your career goals?

My long-term career goal is to become a machine learning researcher who leverages applied mathematical concepts and programming methods to create useful applications. After my experience as a computer vision researcher last summer at Temple University, I realized that one of the most important skills for becoming a great machine learning researcher is to be a good software engineer. I further realized that while understanding mathematical concepts are great, it is vital to be able to translate those ideas into code in order to become a successful machine learning researcher.

Therefore, this summer, as an application/software developer at Morgan Stanley, I hope to learn to maintain and debug large code bases and successfully complete projects. Along the way, I hope to develop good coding habits, debugging skills, and design skills which are all important in order to succeed as a machine learning researcher. Furthermore, Morgan Stanley is one of the leading financial firms with huge amount of data in their database, so this internship can possibly open doors for me as a data analyst or machine learning engineer in the future which can bring me a step closer to becoming an applied machine learning researcher.

9. What preparation have you had for this internship? *(relevant courses, research, or work experience)*

Until now, I have taken the following courses:
i)CSC226Software Design and Implement: Learnt coding skills in python that can be helpful in the internship.
ii)CSC236 Data Structures: Learnt about efficient data structure and algorithms that has improved my design and implementation skills.
iii)CSC425 Operating Systems: I learnt about process management, and scenarios such as deadlock, race condition, mutual exclusion all of which are essential in debugging and designing large financial systems.
iv)CSC 410 Computational Intelligence: Learnt to code in C++ and worked on large projects involving neural networks, and genetic algorithms. Gained useful experience to execute large projects.
v)MAT 433 Numerical Analysis: Learnt to use data analysis software tools like octave and MATLAB which could be used to leverage mathematical skills.
Besides taking these courses, I worked as a computer vision researcher at Temple University under the supervision of Dr. Richard Souvenir. I worked on a project to improve image recognition methods using TensorFlow, Keras, and GPU clusters. This experience has taught me vital presentation, communication, and research skills that can help me succeed in an industry setting.

10. All interns are required to keep a reflective journal *that makes the connection between daily experiences and learning.*

Your academic department or faculty sponsor may have specific guidelines or prompt questions for the journal. Based on those guidelines specify 1) what form the journal will take, 2) How often entries will be made, and 3) when and how it will be submitted.

Beginning on the first week of my internship, I will create an online blog using a publicly accessible, externally dated blogging site, such as WordPress or Blogger. I will submit the link to the blog to the Moodle submission site by the end of my first week.

My blog will meet the following standards for excellence:

- All posts must be reflective, rather than diary entries that solely describe what I did (i.e., not reporting).
- Each post will have an average of 250 words
- Though daily posts are preferred, I will produce a minimum of at least three posts per week.
- Based on the above two metrics, I will produce a minimum of 750 words each week

- I will write in the blog every week I am at the internship (i.e., NOT multiple posts at the end of the internship)
- I will use these Recommended Internship Blog Prompts to aid me in writing blog posts.

Additionally, in the final week of the internship, I will produce a 2 to 3 page final entry which is a larger reflection on the whole experience.

11. All interns are required to submit a final paper.

Based on parameters specified by your primary faculty sponsor, describe the assignment, including topic *(if determined)*, format, spacing, length *(typically 5-10 pages)*, etc. The first draft of the paper is typically due by August 31, for summer internships, or by the last day of classes, if enrolled during fall or spring *(unless another date is specified by your faculty sponsor).*

The final paper will be an experience paper of 6 or more double-spaced pages. The paper will describe my experience, including:

- what I initially hoped to learn in terms of technical content as well as non-technical content
- what I actually learned in terms of technical content as well as non-technical content
- what I learned about myself from this experience
- what advice I would give to myself if you could go back in time to talk to myself before the internship
- a summary of how I feel overall about the experience

I will integrate the answers to the above bullets in the final paper, rather than just inserting answers after bullets.

I will submit the following components to the Moodle submission site by these dates:

- **July 26:** The first draft is due to primary and secondary sponsors.
- **August 9**: The final paper is due to primary and secondary sponsors.

All dates are subject to change by the Computer Science Department. I agree to abide by these changes.

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12. All interns are required to make an oral presentation.

Specify when and to whom this presentation will be given. For summer interns, this takes place sometime prior to mid-term in the fall semester following the internship, or by the last day of classes, if enrolled during fall or spring.

For my oral presentation, I will present a poster at the CSC Poster session.

To prepare for the poster, I will complete the following actions and submit the following components to the Moodle submission site by these dates:

- **September 2:** A poster title and abstract, which is a 100-word description of the topic and content I will be including on the poster.
- **September 9:** A first draft of the poster in a digital format, such as Google Slides or PowerPoint.
- **September 10:** Attend and present at the practice poster presentation session.

- **September 17**: A 24" x 36" final poster ready as a PDF or PowerPoint file for printing by the Computer Science Department.
- **On or about Tuesday, September 24:** Attend and present the final poster at the CSC Internship Poster Session.

Factor in the cost of the poster ($25.00) in your budget.
I am required to invite my supervisor to attend this poster session and remind them as the session date draws near.

All dates are subject to change by the Computer Science Department. I agree to abide by these changes.

13. Additional: This field may be blank, if there are no additional assignments.

Describe any other assignments to be considered in your grade as agreed upon with your Faculty Sponsor.
(i.e., portfolio, lesson plans, supplemental reading or research, literature review)

14. Specify percentages each assignment will carry in determining your grade.
Students enrolled in summer will receive a grade of "N" to accommodate on-campus presentations during the fall semester. The "N" will be changed to a letter grade or an incomplete by mid-term of the fall semester. Fall and Spring semester interns will receive their grades as scheduled for those terms.

Journal: 30%	**Paper**: 30%	**Presentation**:25%
Supervisor's Evaluation: 15%	**Additional**:	**Total**: 100%

15. Summer interns are required to attend the **Internship Launch Party**, which includes a presentation on making the most of your internship experience and a panel of students who have done internships previously. It normally takes place on the last day of spring term classes (April 25, 2019), from 5:30-6:30 in Baird Lounge. A reminder announcement with confirmation of date, time, and place will be sent via email.

16. All interns are required to keep a **timesheet** (available at www.berea.edu/icd). Please have your site supervisor initial it weekly and sign the document when finished. It should be scanned and emailed to *internships@berea.edu* on your last work day, or by August 9th for summer internships (estimate any work hours that are worked after that date), or by the last day of classes for the fall and spring terms. *If your employer has you use a time clock system that will produce a statement showing your total hours, that will be sufficient.*

17. A **Supervisor's Evaluation** of your performance is required and is part of your grade. The evaluation will be emailed to your site supervisor a few weeks prior to the end of the internship, to be completed on or before your last work day. When finished, it should be scanned and emailed (from the supervisor) to *internships@berea.edu*, but no later than August 9th for summer internships, or by the last day of classes for the fall and spring terms. The supervisor's evaluation may also be found at www.berea.edu/ctl under *Internships--Forms and Resources*.

18. All interns are required to complete a **Student Evaluation** of your experience. A link to the online evaluation will be emailed from the Office of Internships a few weeks prior to the end of your internship. It should be completed online, no later than August 9th for summer internships, or by the last day of classes for the fall and spring terms.

19. Funding

Are you requesting funding assistance from Berea College for this internship? No

20. Approvals

	Approval Signature	**Date**
Student		18/03/2019
Primary Faculty Sponsor		
Optional **Secondary Faculty Sponsor**		
Academic Advisor		
Academic Department Chair		
International Student Advisor (if international student)		
Study Abroad Advisor (if internship site is outside US)		
If an approval signature cannot be obtained before the registration deadline, an e-mail stating approval may be sent directly from the individual to: internships@berea.edu		

IMPORTANT:

- Please make an appointment with the Office of Internships to submit the finalized proposal (with all required signatures) prior to the **DEADLINE of April 16, 2019** for summer internships. Funding requests will be reviewed at that time. **Earlier submission is encouraged, to assure appointment availability and funding.** Proposals for Fall and Spring terms are due no later than Friday of the week classes begin.
- You will be registered for summer internships at the end of the spring semester by the Office of Internships. Registration for Fall and Spring will be done prior to the last day to add a class for those terms.

Office of Internships		**Date**