**Name: \_\_\_\_\_Joseph Baruch\_\_\_\_ Major: \_\_Computer Science\_\_\_\_\_\_\_**

**CAPSTONE PROJECT BID PORTFOLIO  
Due at Beginning of Class on Thursday, September 4**

**PART 1:**

**A person smiling at the camera

AI-generated content may be incorrect.**

**PART 2:**

**List your Top 5 project choices (by number & name) in Rank Order.**

|  |  |  |
| --- | --- | --- |
|  | **Project #** | **Project Name** |
| **First choice:** | **54** | **AI for Agriculture** |
| **Second choice:** | **31** | **Software Defined PLC** |
| **Third choice:** | **51** | **Computer Vision-Assisted Identification of Killer Yeast Strains** |
| **Fourth choice:** | **55** | **Lightcast Localization Software** |
| **Fifth choice:** | **45** | **AI-powered Academic Planner Agent I** |

Describe your career goals after graduation. Are there specific industries or fields you want to work or study? Do you want to pursue a job in industry or academia?

Following graduation, I plan to pursue a career in software engineering or a related field within the tech industry. I am especially interested in critical infrastructure, cloud computing, and artificial intelligence, though I am open to any meaningful and rewarding work. My goal is to use my skills to make a positive impact on society (for instance, I don’t want to contribute to attention-mining platforms like TikTok).

**Provide a one paragraph rationale for each choice, addressing the following questions.**

* How is this choice related to your professional interests/career goal?
* What new insights, beyond the online description, were gained about this project and the sponsor/client through interactions at the Project Fair?
* What technical skills are needed in this project and how will you acquire/provide these?

Project Choice Rationalization

1. **AI for Agriculture**

AI for Agriculture is the project pick that aligns most with my career goal of helping society. Having a positive impact on agriculture and the food we eat, is very motivating. During the project fair, I gained insight on this project through learning about Biochar as well as understanding that we would be building this project from the ground up. After taking AI classes at university and having experience with the cloud and web development, I feel I am a perfect fit for this project.

1. **Software Defined PLC**

During my internship at SEL, I’ve gained exposure to PLCs and Automation Controllers, primarily working alongside these systems. This project would allow me to deepen my skills in logic systems by contributing more directly to design rather than focusing only on development. The knowledge and experience I gain from this project would directly complement my internship and align with my long-term career goals in software engineering, making it a highly motivating opportunity for me.

1. **Computer Vision-Assisted Identification of Killer Yeast Strains**

After speaking with the project sponsor, I became very interested in this opportunity. The chance to contribute to identifying new killer yeast strains is exciting and impactful. This project has the potential to strengthen my skills as a researcher while also building on my background in machine vision and AI. Most importantly, it aligns with my career goal of applying my skills to create a positive impact.

1. **Lightcast Localization Software**

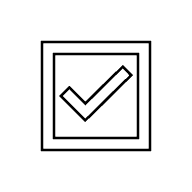
I greatly enjoyed speaking with the project sponsors, who emphasized that this effort marks the beginning of Lightcast’s localization initiatives. Contributing to a project that will be deployed and used in the real world would be deeply rewarding. I am especially excited by the opportunity to apply AI in web development—a field I am passionate about and eager to explore further.

1. **AI-powered Academic Planner Agent I**

Throughout college, I’ve been passionate about having my academic path sorted out. I’ve loved experimenting with degree plans and making sure I’m no track. I’ve done most of this work on my own because the current tools and resources the university provides were not sufficient. I’d enjoy and work hard at applying my experience to create the tool I wish I had going into college by leveraging my extensive experience in databases, web dev, and AI.

**PART 3:**

Many of our externally funded projects require a Student Educational Activity (SEA) agreement between the university and the sponsor. This agreement ensures that the funding sponsor will be entitled to retain the intellectual property developed via the project. Without this agreement, sponsors would be reluctant to provide opportunities for us to work on projects that affect their business. As a result, if you request a project requiring an SEA, and you are assigned to a team on an SEA project, you will be asked to sign a Student Activity Participation Agreement (SAPA). Please indicate your willingness to sign an SAPA agreement if you are assigned to one of these projects.

\_\_\_\_\_ I am willing to sign a SAPA agreement if I am assigned to an SEA project.

**PART 4: Personnel Survey**

**Complete the following personal material, which will help us to know you better and to make an appropriate capstone design assignment for you. Please respond honestly, thoroughly, and thoughtfully. Provide support for each of your answers.**

Your Name: \_\_Joseph Baruch\_\_\_\_\_\_\_\_\_\_\_\_ Hometown: \_\_\_\_Eagle, Idaho\_\_\_

Dept./Program: \_\_\_\_\_College of Engineering/Computer Science\_\_ GPA: \_3.81

Graduation Date: \_\_\_May 2026\_

1. What is your anticipated level of commitment to the project? Do you desire a role as leader or project manager? Or do you prefer to add value as a solid team member?

I can be decently committed. I would be interested in project manager work or a leadership role. Outside of my internship, this can be one of my top priorities. I’m a skilled communicator so I can work more with presentations and proposals as well.

1. Identify which of the following areas you are most excited to do in contributing to your project (indicate all that apply):
2. **Project leadership**
3. Solid modeling
4. Prototype build and Manufacturing
5. **Documentation**
6. **Engineering Analysis**
7. List your preferences for who you might like as teammates for your project (not guaranteed).

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1. List anyone in this class with whom you feel there is no possible way that you could work with on an extended project.

N/A

1. Do you have any other commitments this year which will constrain your available time to engage on the project? Provide times which you know you will NOT be available.

I’ll be working at SEL as a part-time intern on Tuesdays through Thursdays from 8:00 AM to 12:30 PM.