SFU ROBOT SOCCER TEAM HIRING PACKAGE

APPLY TO BE A PART OF OUR 2024-2025 TEAM

CONTACT US

WEBSITE: www.sfurobotsoccer.com
INSTAGRAM: sfurobotsoccer
EMAIL: sfurs@sfu.com

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ABOUT US_____

"SFU Robot Soccer [SFURS] aims to combine the excitement of soccer with the future of automated technology as we compete in RoboCup competitions." - Zachary Spencer *President of SFURS*

IMPACT

Our team encourages students from all programs to come together and learn concepts that are not taught in class and get hands-on experience with robotics, artificial intelligence, and teamwork.

MISSION

At SFURS, our sub-teams work together to build a team of autonomous soccer-playing robots, blending all aspects of artificial intelligence and robotics.

APPLICATION PROCESS

TECHNICAL TEAM PROCESS

01
Written Application
Applicants must submit their written application by: **JAN 26, 11:59 PM**

02
Interview Offer
Selected applicants will receive an interview offer by: **ROLLING BASIS**

03
In-person Interview
Interviews will be conducted from: **JAN 27 TO JAN 31**

04
Offers Sent Out*
Successful applicants will receive a position offer by: **FEB 2, 11:59 PM**

*Successful applicants will be required to have a minimum of 8 months committed to the role

*All meetings and position-related events will take place at the SFU Burnaby Campus

BUSINESS TEAM PROCESS

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BUSINESS TEAM POSITIONS

FINANCE COORDINATOR

RESPONSIBILITIES

- Help track and manage all club expenses, ensuring transparency and accuracy in financial records

- Help ensure compliance with SFSS and FAS funding guidelines to properly allocate and spend funds

- Data entry of club finances into master sheet

REQUIREMENTS

MUST HAVE

- Strong written and oral communication skills

- Strong organizational skills for managing budgets, tracking expenses, and ensuring financial accuracy across all club activities

- Ready to learn and be able to take feedback

NICE TO HAVE

- Taken BUS 251 and 254, knowledge of Excel and basic accounting principles

COMMITMENT

- Finance Coordinator is expected to commit **3-5 hours each week** as well as attend meetings with the VP of Finance, and attend all organization-wide meetings

OUTREACH COORDINATOR

RESPONSIBILITIES

- Organize 1-3 outreach events per semester at local high schools

- Aim of outreach events to teach young students the principles of engineering and robotics

- Ensure the content taught is accessible and easy enough for beginners, while also being challenging enough to be fun

- Be a positive role model and represent the values of SFURS

REQUIREMENTS

MUST HAVE

- Strong written and oral communication skills for Strong organizational skills for managing budgets,

- Be a willing and able teacher, be approachable and informative

- Have patience with students who may be complete beginners

NICE TO HAVE

- Have past experience in education or are an education major

COMMITMENT

- Outreach Coordinator is expected to commit **3-5 hours each week** as well as attend meetings with the VP of Administration, and attend all organization-wide meetings

VP OF ADMINISTRATION

RESPONSIBILITIES

- Take meeting minutes of executive meetings

- Plan 1-2 social events per semester

- Maintain organization of club infrastructure (Discord, Google Drive, email, etc.)

- Take meeting minutes, keeping track of club assets

REQUIREMENTS

MUST HAVE

- Strong written communication skills

- Excellent time management/organizational skills to handle regular communications
- Takes initiative

NICE TO HAVE

- Fast at typing

- Prior experience in administrative/secretary role

COMMITMENT

- The VP of Administration is expected to commit **5-7 hours each week as well as** attend weekly executive meetings with the team, and attend all organization-wide meetings

VP OF PUBLIC RELATIONS

RESPONSIBILITIES

- Creating promotional material that aligns with SFU Robotic Soccer's goals and values
- Ability to work with a team to create high quality content in time sensitive environments
- Support in designing visual content for various projects
- Attending events and key design team meetings to capture media content to facilitate the creation of meaningful promotional content
- Prepare and facilitate pitch meetings to corporate prospects and industry professionals to secure sponsorships

REQUIREMENTS

MUST HAVE

- Experience with Visual design software (Figma, Canva, Photoshop, After effect, etc.)
- Proficiency in using camera equipment

NICE TO HAVE

- Experience as a media coordinator or marketing coordinator for other clubs
- Experience as a photographer / artistic photography
- Completion of Interactive arts and technology (IAT) related coursework
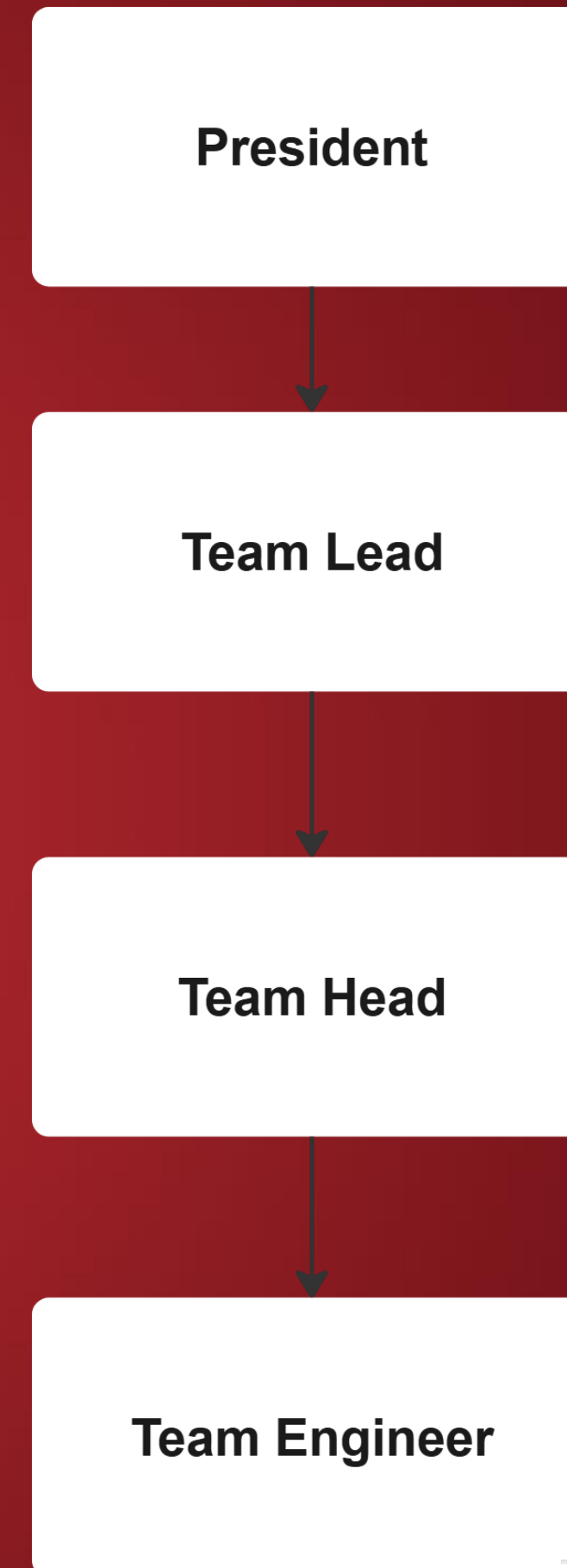
COMMITMENT

- The VP of Public Relations is expected to commit **5-7 hours each week** as well as must attend weekly executive meetings with the team, and attend all organization-wide meetings

TECHNICAL TEAM POSITIONS

TEAM STRUCTURE

President

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Team Lead

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Team Head

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Team Engineer

MECHANICS LEAD

RESPONSIBILITIES

- Lead entire mechanics team in charge of designing physical components of our robot including drive train, chassis, kicker, etc.

- Solve the most difficult technical challenges the team faces

- Assist in system level planning and delegate tasks

- Research and evaluate materials essential for the projects, ensuring consistent improvement of mechanical quality

REQUIREMENTS

MUST HAVE

- Excellent grasp of CAD software

- Excellent leader that works well with others; ability to delegate tasks and form working groups efficiently

NICE TO HAVE

- Past experience in mechanics development

COMMITMENT

- Head of Mechanics is expected to commit **5-9 hours each week** and attend/attend weekly meetings with their subteam, and attend all organization-wide meetings

ELECTRONICS LEAD

RESPONSIBILITIES

- Lead the entire electronics team in charge of making PCB's and other electronic components

- Solve the most difficult technical challenges the team faces

- Assist in system level planning and delegate tasks

REQUIREMENTS

MUST HAVE

- Excellent leader that works well with others; ability to delegate tasks and form working groups efficiently

- Excellent soldering and PCB production skills

NICE TO HAVE

- Experience in electronics development

COMMITMENT

- Head of Electronics is expected to commit **5-9 hours each week** and attend/attend weekly meetings with their subteam, and attend all organization-wide meetings

FIRMWARE LEAD

RESPONSIBILITIES

- Responsible for leading the entire firmware team, tackling more challenging tasks within the firmware codebase

- Key tasks are robot integration, firmware-hardware testing, communication, etc.

- Contribute to strategic planning, ensuring codebase remains robust and maintainable
Go to resource

REQUIREMENTS

MUST HAVE

- Excellent leadership and communication skills

- Deep understanding of embedded systems, including hardware-software integration and microcontroller architectures

NICE TO HAVE

- Prior experience with embedded systems

COMMITMENT

- Head of Firmware is expected to commit **5-9 hours each week** and attend/attend weekly meetings with their subteam, and attend all organization-wide meetings

HEAD OF MECHANICS

RESPONSIBILITIES

- Head a team in charge of assembling physical parts of the robot

- Provide guidance and assistance to team members to overcome technical challenges

- Work with other subteams to integrate electronics and ensure overall project alignment

REQUIREMENTS

MUST HAVE

- Should know Solidworks and/or other parametric CAD programs as well as experience with 3D printing

- Excellent leadership and communication skills; good planning and organizational skills

NICE TO HAVE

- Ability to learn quickly

COMMITMENT

- A Mechanics Co-Lead is expected to commit **3-7 hours each week** and must hold/attend weekly meetings with their subteam, and attend all organization-wide meetings

HEAD OF ELECTRONICS

RESPONSIBILITIES

- Lead a team in both project management and technical aspects

- Provide guidance/assistance with challenges that team members may face

- Work with other subteams to integrate electronics and ensure overall project alignment

REQUIREMENTS

MUST HAVE

- Excellent leadership and communication skills; good planning and organizational skills

- Experience soldering components

NICE TO HAVE

- Ability to learn quickly

COMMITMENT

- An Electronics Co-Lead is expected to commit **3-7 hours each week** and must hold/attend weekly meetings with their subteam, and attend all organization-wide meetings

HEAD OF FIRMWARE

RESPONSIBILITIES

- Assist in managing and coordinating firmware teams projects, ensuring efficient workflow

- Provide mentorship and guidance to team members, explore and teach embedded systems programming

- Take responsibility and lead specific projects and teams, working with other co-lead to maintain alignment with project goals

REQUIREMENTS

MUST HAVE

- Strong leadership and communication skills + great problem-solving skills

- Highly proficient in C programming language and understanding of embedded systems architecture and low-level programming

NICE TO HAVE

- Prior experience in embedded systems; ability to learn quickly

COMMITMENT

- A Firmware Co-Lead is expected to commit **3-7 hours each week** and must hold/attend weekly meetings with their subteam, and attend all organization-wide meetings

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MECHANICS ENGINEER

RESPONSIBILITIES

- Help design and prototype mechanical and electromechanical systems on our fleet of robots

- Fabrication and assembly of parts including drive train, chassis, and kicker

- Research and evaluate materials essential for the projects, ensuring consistent improvement of mechanical quality

REQUIREMENTS

MUST HAVE

- Basic knowledge of Solidworks and/or other computer modelling programs

- Basic proficiency in manufacturing methods such as 3D printing, Laser cutting, and CNC

NICE TO HAVE

- Skilled in 3D Printing

COMMITMENT

- A Mechanics Engineer is expected to commit **2-5 hours each week** and must attend weekly meetings with their subteam, and attend all organization-wide meetings

ELECTRONICS ENGINEER

RESPONSIBILITIES

- Design and modify custom PCBs and other electronics using Altium designer

- Actively engage in troubleshooting and providing solutions to problems on current board designs

- Work collaboratively with other members to integrate new components on the robots

REQUIREMENTS

MUST HAVE

- Good to strong understanding on electrical components

- Knowledgeable on component interactions in a circuit

- Capable of understanding and interpreting data sheets

NICE TO HAVE

- Experience in soldering and using Altium for PCB Design

COMMITMENT

- An Electronics Engineer is expected to commit **2-5 hours each week** and must attend weekly meetings with their subteam, and attend all organization-wide meetings

FIRMWARE ENGINEER

RESPONSIBILITIES

- Implement the firmware for the electronic circuit boards

- Perform testing of firmware code on the robots and robotic components

- Involves contributing to code reviews, debugging, and optimizing firmware

- Programming robot's electronic components and communication module

REQUIREMENTS

MUST HAVE

- Self motivated to work and collaborate with others

- Proficient in C programming language

- Solid understanding of embedded systems, including microcontroller programming

NICE TO HAVE

- Passionate about firmware development and willingness to learn new skills and concepts

COMMITMENT

- A Firmware Engineer is expected to commit **2-5 hours each week** and must attend weekly meetings with their subteam, and attend all organization-wide meetings

SOFTWARE DEVELOPER

RESPONSIBILITIES

- Implement new project components involving AI and C++ networking

- Write documentation within the code and README files

- Work in a team environment

NICE TO HAVE

- Experience with PyBind11 or Python C API

- Experience with GUI development (Qt, Rust, etc.)

REQUIREMENTS

MUST HAVE

- Confident in solving medium difficult LeetCode problems in C++ or Python

- Proficient in using C++ STL libraries and Python libraries

- Self motivated to work

- Demonstrate capability and willingness to learn in a fast paced environment

COMMITMENT

- A Software Developer is expected to commit **2-5 hours each week** and must attend weekly meetings with their subteam, and attend all organization-wide meetings

HAVE QUESTIONS?

CONTACT US

🌐 www.sfurobotsoccer.com

📷 sfurobotsoccer

✉️ sfurs@sfu.com

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