

Robotic Autonomy

Carnegie Mellon University
Application Form

Personal Details

Name _____
Last First Middle Initial

Email address _____

Address _____
Street Address

City, State and Zip Code

Date Of Birth _____

Home Tel No _____

Current High School Class _____ **High School GPA** _____

High School Details

Name _____

Address _____
Street Address

City, State and Zip Code

Please answer each the following questions. Type your answers, print them out and attach them to this application form when mailing your application materials to Carnegie Mellon University. Questions 1 and 4 are short answer- one paragraph or less. Questions 2 and 3 can be longer as indicated.

1. How do you believe you will benefit from this summer course?
2. Design a robotics project that you would undertake after graduating from Robotic Autonomy. Remember, you will be keeping the home Rover robot that you construct and program in this course, so this Rover may have a role in your project. Describe your robotics project, but do not exceed 2 pages, including text and figures or illustrations.
3. Describe in detail any previous experience you have had in programming, building or using robots or other electro-mechanical systems. Prior experience is of great value for this course, so be complete. Do not exceed 1 page of text.
4. This course is intended for students who are comfortable programmers. Describe your programming experience, identifying courses at high school or elsewhere in which you have developed your programming experience. If you believe you have programmer mastery, but this is not evident from your transcript, then describe your extra-curricular programming experiences, including languages and operating systems with which you are familiar.
5. The following is a simple programming problem in C that will help us verify your knowledge of programming. The function `fibonacci(n)` is intended to print out the first `n` values of the Fibonacci Sequence. For instance, calling `fibonacci(4)` ought to result in the following output:

```
>fibonacci(4)
1,1,2,3
>
```

The code as given below has several bugs. Describe the required corrections.

```
/* prints out the first n fibonacci numbers */
void fibonacci (int n)
{
    if (n == 0) return;
    printf("\n1");
    if (n == 1) return;
    printf(",1");
    fiborecurse(1,1,n-2);
    printf("\n");
}

/* helper function for fibonacci */
void fiborecurse (int n1,int n2,int n)
{
    int n3=n1+n2;
    if(n==0) return;
    else {
        fiborecurse(n1,n2,n);
        printf(",%d", n3);
    }
}
```

}
}

Reminder

Send this application form via snail mail to the address provided on the Robotic Autonomy web site along with the following additional documents:

- Complete answers to questions 1 – 5 above
- An official High School transcript
- A check for the amount of \$20, payable to Carnegie Mellon University

Also, remember to check with your teacher recommender to verify that he or she has sent us a completed recommendation form before the deadline.