

*University of Minnesota Duluth
Swenson College of Science and
Engineering*

Proudly presents the

Computer Science Alumni
Scholarship

to

Ethan Johnsrud

*In recognition of high academic achievement in the
Department of Computer Science
October 28, 2019*



As I began my career in software development, I am continuously growing in my knowledge of Computer Science and my admiration for the coding process. Looking at my growing up, many of my projects and interests we're quite similar to coding. I enjoy thinking through every step of the process prior, and the logic and problem solving within a set of guidelines fits my personality well. From when I did a greenhouse plant business, I tracked germinations, growth rates, and bloom times. In which I created a complex excel sheet to predict and analyze time to start the seeds in the spring and how to optimize growth, while simplifying and minimizing expenses. I've created a few programs on my own over the past two years. While in CS 1, I created a Pac-Man Game with an AI, with increasing difficulty levels, to play against; for each move, the entire board was reprinted to the terminal. I studied the logic behind the personalities of each enemy and had to implement all the rules and exception to the rules for character movement. This year, since learning Java, I have created a complex meal-planning application. It comprised of a Catalog list of options, Menu list that the client creates and shopping list that is hence generated to a text file for printing. I am continuously thinking of additional features to add, including a random meal generator, price optimization, and hopefully a favorites or trends tracking feature for better customization. Recently I have been working on a financial analysis application that reads in my transaction history for the bank in csv form and returns a analysis document split with past month, quarter, and year. All of which include a trends graph, top transactions, and difference analysis. Working with numerical data and analysis has made me consider how to handle outliers, median vs mean, and how the data is then affected. Something I am particularly satisfied with, is most of my programs were tested with trial and error and often is not all that thorough. This last financial analysis program, I created a testing class that generates random transactions and then runs all the possible reports, while generating a data log to track all the calculations. I have found this to be extremely helpful in trouble shooting. As I grow in my learning, I find that I am getting better and better at looking up compiler errors and understanding API's to learn new features. I truly have learned a lot and am excited to continue to develop in my understanding of Computer Science.

As I look forward towards a career in Software Development, I know I have a long way to come in my knowledge and proficiency. Last year, I shadowed a Senior Software Developer, Jamie Sartell of Sartell Group in Minneapolis. He shared how the industry is moving towards web Applications, that are more compatible and accessible for businesses. His typical day consists of troubleshooting projects, maintaining previous projects, and the company allows him to work on his own creative project as well. This experience opened my understanding to software development and what a career would entail. This semester I am taking an online course in JavaScript to grow my understanding and proficient in the web-based language. This summer I have applied for a few internships in the cities, to hopefully get some exposure to the field and learn alongside professionals the different opportunities available in the field. Also I hope to begin to learn python and XML this summer, to expand my arsenal of languages and knowledge. Looking forward beyond graduation, I would like to work in a smaller software development company; perhaps in cyber security, while I haven't had the opportunity to learn much in this area, I know it is growing and quite interesting. This scholarship will allow me to focus on my studies putting more effort into my deployment in Computer Science.

ETHAN JOHNSRUD

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Objective: To excel as a software developer through hard work, perseverance, and dedication.

Skills: Communication, leadership, technologically proficient, organization, adaptable, dependable, responsible, hard-working, desire to learn

Education: University of Minnesota Duluth Duluth, MN Graduation: 2021
Major: Computer Science B. S. GPA: 3.56 out of 4.0 scale

Faribault High School Faribault, MN Graduation: June 11, 2017
GPA 3.99 out of 4.0 scale
Class Rank 11 out of 269
ACT Composite 25

Certifications: Red Cross WSI May, 2018 Red Cross Lifeguard/CPR May, 2018
PADI Scuba May, 2012

Experience: Front Desk Super 8 Hotel September, 2018-Present
Answering phones, reservations, cash register sales, addressing concerns.

Highway Maintenance Rice County June, 2017-August, 2018
Perform maintenance on roadways, equipment and manage control of traffic flow

Lifeguard City of Faribault June, 2016- August, 2018
Maintain safe environment, chemical water testing, record keeping, facility cleaning

Guest Service City of Faribault June-August, 2018
Communicate effectively with patrons, front desk and concessions sales

Water Safety Instructor Faribault Public Schools June, 2016-August, 2017
Innovative teaching, lesson planning, record keeping, communication

Nursery Worker Faribault Garden Center April, 2014-June, 2016
Customer service, production, assembly, maintenance

Volunteer: Scouting for Food 2007-2017 Band Camp Instructor 2013-2015
Vacation Bible School 2013-2015 5th Grade Track/Field Day 2015-2017
Freshmen Orientation Leader 2015-2016 Eagle Project 2015-2016

Activities: Boy Scouts 2004-2017 Swimming Team 2010-2017
School Concert Band 2010-2017 Crusaders Marching Band 2012-2016
School Pep band 2013-2017 Community Concert Band 2013-2017
Robotics Team 2014-2016 National Honor Society 2015-2017

Awards: A-Honor Roll 2010-2017 NHS Induction 2015
Varsity Swimming Letterman 2015, 2016, 2017 Eagle Rank – BSA 2017

References: Dan Ford FEFC Senior Pastor 1-507-838-1787
Larry Gavin ISD 656 English Teacher 1-507-333-6357
Stanley Bow Faribault Garden Center Owner 1-507-334-9016