The CIS curriculum at Bentley is world class, through it I have gained a broader knowledge than many of my previous peers some of whom are attending rigorous curricula at prestigious universities in computer science. Through my studies at Bentley I have been introduced to advanced programming, database design, software design, network architecture, and many other areas of technology. These experiences have helped elucidated an image of where I would like to begin my career, that being a career in software design. This is why I am requesting a guided study in data structures and algorithms in Java. Through my course work in CS180 and CS280 I have only become further fascinated with programming and software engineering. A guided study in data structures and algorithms would allow me to continue my education in this area.

The guided study that I am proposing would cover topics such as Big O notation, advanced data structures such as graphs, binary trees, queues, and sets, and intermediate algorithms such as hashing algorithms, garbage collection algorithms, and graph algorithms. Through this study I will have hands on experience with the implementation of these tools through many homework’s, essays on my understanding of key topics, and a course project. The course project will utilize not only what I have learned in this study but also the design methodologies I have learned in CS360, the server management ability I have gained from CS240, and the database utilization techniques I have gained from CS150 and will learn in CS380. I intend to gain a complete experience from the design to the deployment of software that will better prepare me for my desired career.