**ROADMAP for RET 2018 Project#3**

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| **Date** | **Research Expectations** |
| **Week 2** | **Introduction to programming + MATLAB** |
| June 18 | Programming Basics I: * Data types (variables + constants)
* Assignment
* Operators
* Loops and control flow
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| June 19-20 | Programming Basics II:* Arrays,
* Functions
* Scope
* Basic of Pointers, Classes, structures (if time permits)
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| June 21 | Introduction to MATLAB I: Basic functions and syntax |
| June 22 | Introduction to MATLAB II: Plotting and other display features |
| **Week 3** | **Introduction to research objectives + 2-OPT research**  |
| June 25 | Introduction to TSP Problem- Problem statement, applicability and present optimized solutions and methods used |
| June 26 | Bird’s eye view of 2-OPT and GA Algorithms: Basic principles involved, applications and programming parallels in MATLAB  |
| June 27  | Understanding 2-OPT principles and applying to present research |
| June 28 | Build Algorithm and generate code |
| June 29 | Debug compiler errors, Obtain results and Optimize solutions |
| **Week 4** | **GA research** |
| July 2 | Introduction to GA theory |
| July 3 | Techniques involved in GA mathematical/programming analogies  |
| July 4 | Holiday |
| July 5 | Possible applications to develop Solution to TSP  |
| July 6 | Building Algorithm, Generating basic structure of code  |
| **Week 5** | **GA/2-OPT hybrid** |
| July 9 | Debugging, Trial and error for optimized solutions |
| July 10  | Research results review, brainstorming further scope of optimization |
| July 11 | Introduction to clustering techniques and scope in present research |
| July 12 | Conduct additional research to further optimize results |
| July 13 | Optimize codes |
| **Week 6** | **Finalizing research results** |
| July 16 | Compile results and research analysis |
| July 17  | Define future goals, substantiate literature review and draw parallels |
| July 18-19 | Work on report + PPT presentation |
| July 20 | Report Submission |