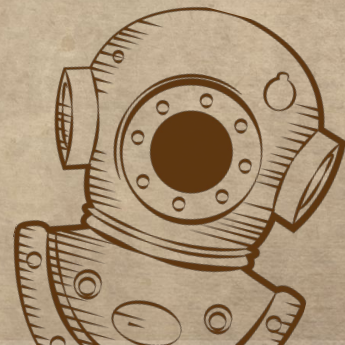
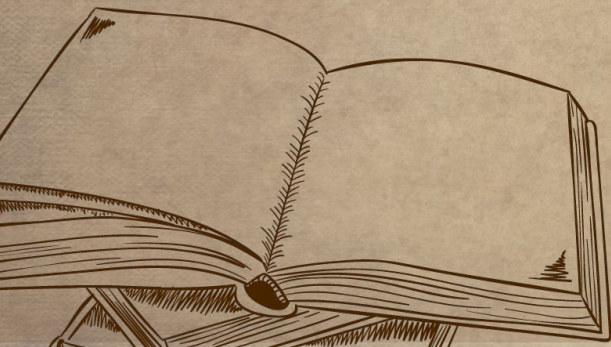




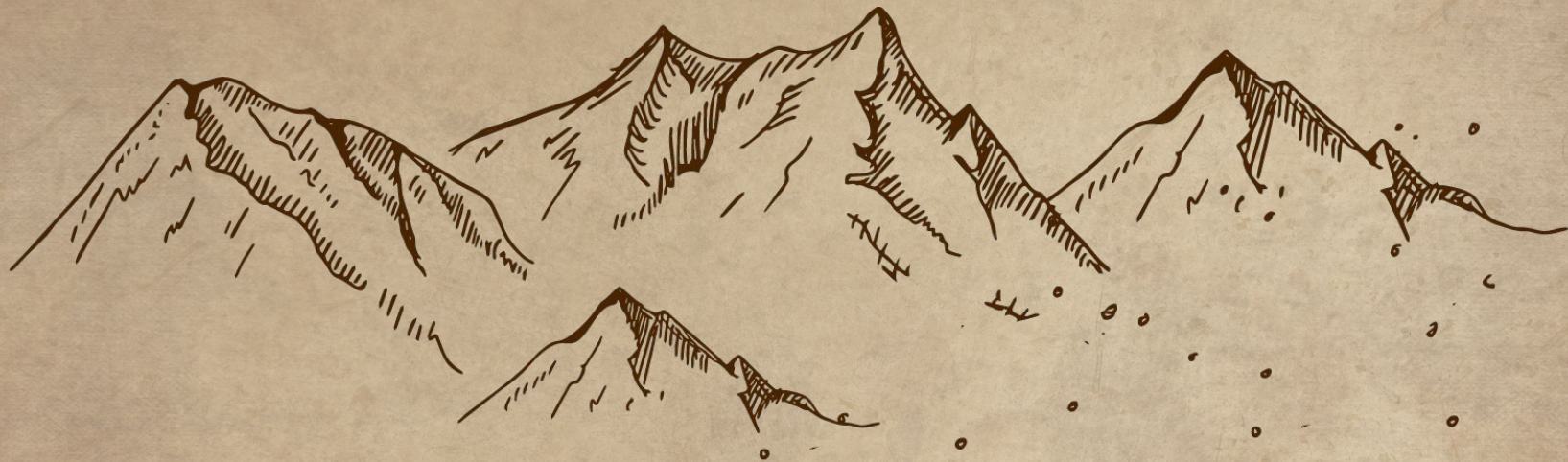
# WE DID A THING!

---

Here's how we did it







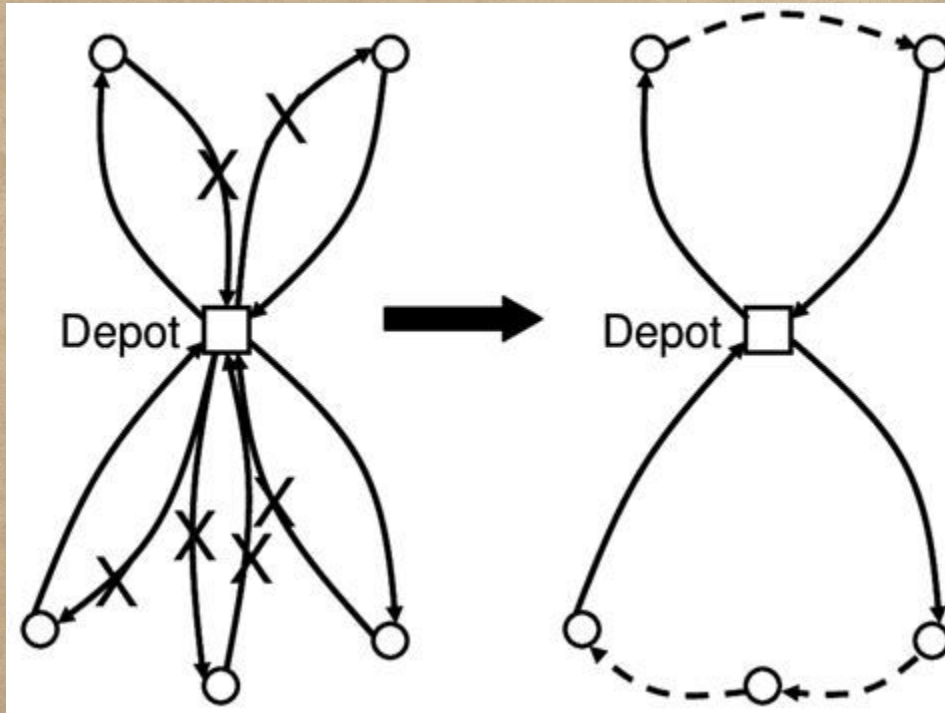
01 Clarke Wright

03 Bin Packing Fallback

02 Our Improvements

04 Results

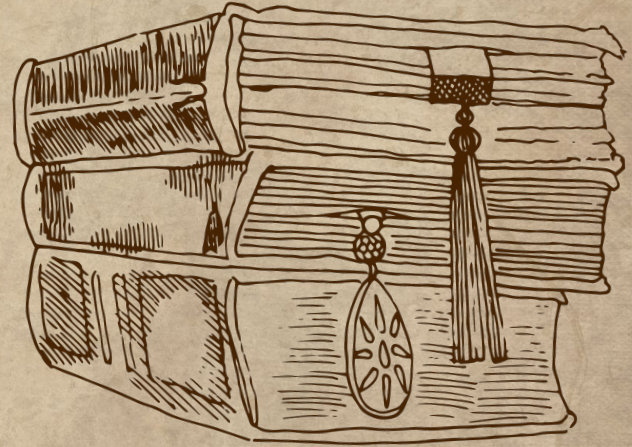
# CLARKE WRIGHT



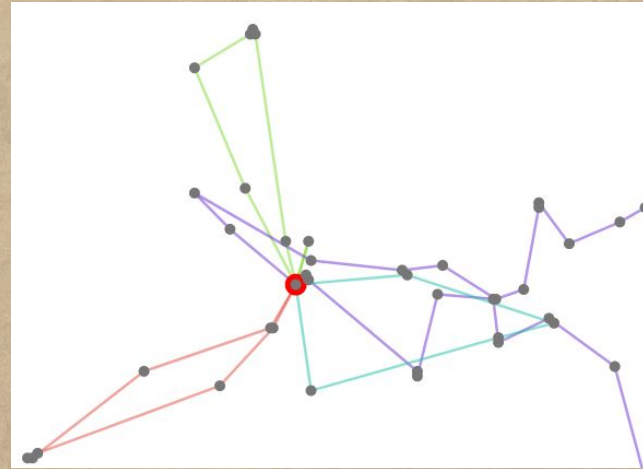
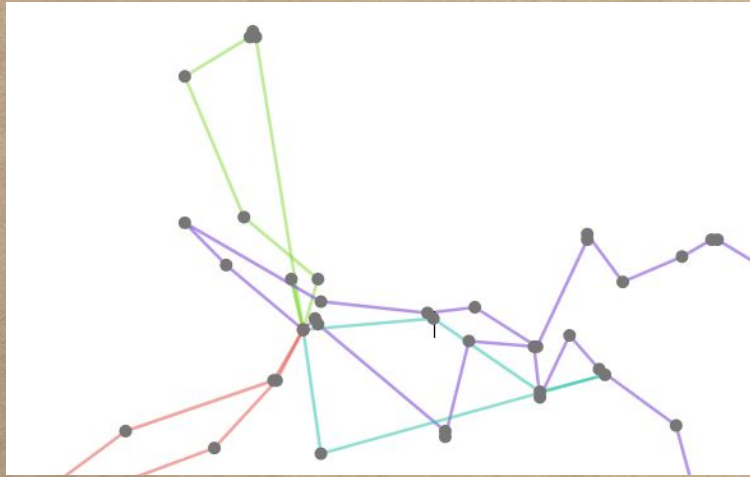


# IMPROVEMENTS

- Better Objective for Clarke Wright algo
- Local 2 opt-swap
- Intertour 2-opt swap
- Shuffles & Restarts

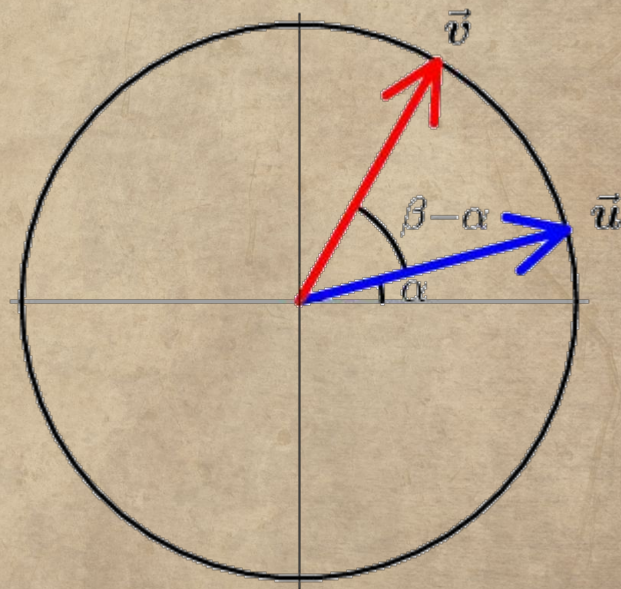
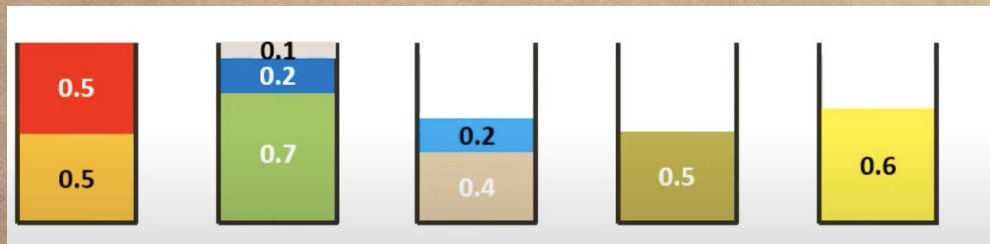


## 2 Opt Swap Visualization

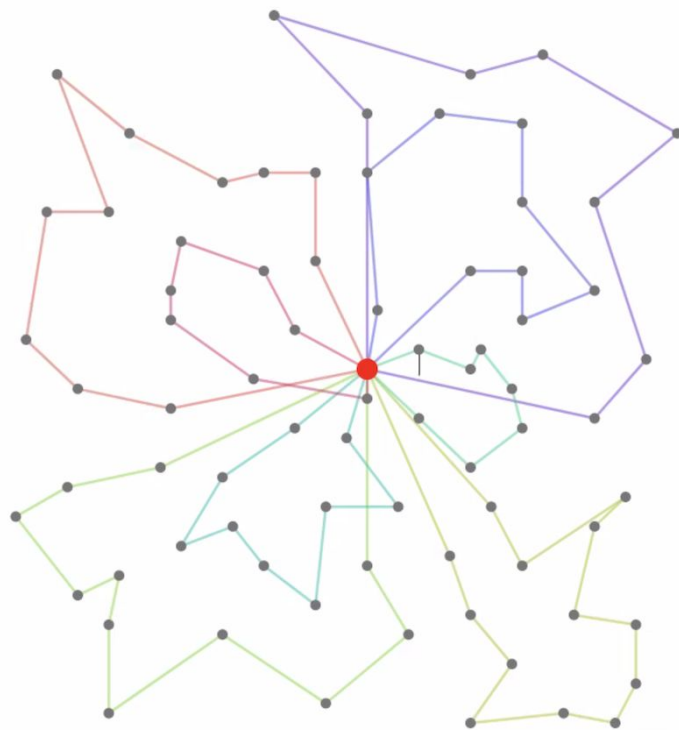




# BIN PACKING + ANGULAR DISTANCE



# Visualizing Results





# THINGS THAT DIDN'T WORK

- Node Transfer
- 3-opt swap







## Image sources



[https://www.researchgate.net/figure/Example-showing-the-use-of-the-Clarke-and-Wright-Savings-Algorithm-for-the-Vehicle\\_fig6\\_35940168](https://www.researchgate.net/figure/Example-showing-the-use-of-the-Clarke-and-Wright-Savings-Algorithm-for-the-Vehicle_fig6_35940168)

<https://www.youtube.com/watch?v=qbuMPi44bVQ>

[https://www.maa.org/sites/default/files/images/upload\\_library/4/vol6/Dray2/Dray.xml](https://www.maa.org/sites/default/files/images/upload_library/4/vol6/Dray2/Dray.xml)

**Theme used:**

<https://slidesgo.com/theme/papyrus-history-lesson#position-7&results-14382>