

Metaprogramming for Contract Algorithms

Summer 2022

Details

Objective	To develop a framework for compiling programs of contracts algorithms with branching and looping logic in order to formally compose real-time intelligent systems
Intern	Mason Nakamura
Advisor	Stuart Russell
Mentor	Justin Svegliato
Meetings	Wednesday 2PM - 2:45PM
Zoom	271 123 1234
Slack	#mca
Github	https://github.com/justinsvegliato/metaprogramming-for-contract-algorithms
Overleaf	https://www.overleaf.com/project/620d22339797097a9a96eed8

Schedule

Week	Due	Reading	Tasks	Deliverables
1	6/8	[Zilberstein, 1996] [Zilberstein and Russell, 1996] [Zilberstein, 1993] • Chapter 5.6.1 [Grass and Zilberstein, 1996] [Svegliato et al., 2020] [Bhatia et al., 2022]	<ul style="list-style-type: none">• Develop the compilation problem (by formalizing definitions and the optimization problem)• Develop a naive solution method (by formalizing an algorithm)	<ul style="list-style-type: none">• Formal definitions• Formal optimization problem• Formal algorithm
2	6/15	—	—	—
3	6/22	—	—	—
4	6/29	—	—	—
5	7/6	—	—	—
6	7/13	—	—	—
7	7/20	—	—	—
8	7/27	—	—	—
9	8/3	—	—	—
11	8/10	—	—	—
12	8/17	—	—	—
13	8/24	—	—	—

* Each deliverable should be completed by the date posted in the schedule.

* This document is subject to change during each week of the internship.