FRED Modeling Platform Introduction

['Epistemix Inc.']

Aug 30, 2021

CONTENTS

Return to docs home

Welcome to the Framework for Reconstructing Epidemiological Dynamics, or FRED. FRED is a programming language for writing agent-based models. The world presented by FRED is populated with agents representing individual people. These individuals, or agents, have demographic features such as age, gender, and race and are grouped into households with specific locations. The world also includes other places such as schools and workplaces. FRED simulates the daily activities of each individual and tracks changes in the population resulting from the actions of individuals and their interactions with the environment and with other agents.

This document introduces the FRED Modeling Platform™. If you have questions about Epistemix or are interested in speaking with our sales, recruiting, or other teams, please visit our main site at epistemix.com.

The platform environments provided by Epistemix enable users to compile and run agent-based models built with the FRED Modeling Language™. There are a few different solutions provided for this purpose, as described below. Documentation for these environments is made available as these components are released for customer use.

FRED Simulation Information Management System (SIMS) Part of the core FRED environment, the FRED SIMS tools support the compilation, execution, and analysis of FRED programs. These tools are available for use within the FRED Local environment and are used by the FRED Command-Line Interface (fredcli).

FRED Local The local version of the FRED Modeling Platform is provided as a Docker® image that allows FRED programs to run on a local machine. This environment is suitable for PC, Mac, and Linux operating systems.

FRED Command Line Interface (fredcli) The FRED CLI, or just *fredcli*, supports FRED programs running in a cloud-based environment, referred to as FRED Cloud

FRED Application Programming Interface (FRED API) The FRED API provides REST-based access to the FRED Cloud environment. This API is used both other tools such as *fredcli* to manage FRED programs in the cloud.

FREDpy A python interface for managing FRED programs and interacting with FRED Cloud.

FRED Studio The future web application for building, managing, executing, and analyzing FRED programs in the cloud.