## Markov::Model< char > nodes - starterNode - edges + Model() + RandomWalk() + AdjustEdge() + Import() + Import() + Export() + Export() + StarterNode() + Edges() + Nodes() + OptimizeEdgeOrder() Д Markov::API::MarkovPasswords - datasetFile modelSavefile outputFile + MarkovPasswords() + MarkovPasswords() + OpenDatasetFile() + Train() + Save() + Generate() + Buff() - TrainThread() GenerateThread() Д Markov::API::ModelMatrix # edgeMatrix # valueMatrix # matrixSize Markov::API::CUDA:: # matrixIndex CUDADeviceController # totalEdgeWeights # ready + ModelMatrix() + ListCudaDevices() + ConstructMatrix() # CudaCheckNotifyErr() + DumpJSON() # CudaMalloc2DToFlat() + FastRandomWalk() # CudaMemcpy2DToFlat() + Import() # CudaMigrate2DFlat() + Train() # FastRandomWalk() # FastRandomWalkPartition() # FastRandomWalkThread() # DeallocateMatrix() Markov::API::CUDA:: CUDAModelMatrix device\_edgeMatrix device\_valueMatrix device matrixIndex device\_totalEdgeWeights device\_outputBuffer outputBuffer - flatEdgeMatrix - flatValueMatrix - cudaBlocks cudaThreads - iterationsPerKernelThread totalOutputPerSync - totalOutputPerKernel - numberOfPartitions - cudaGridSize - cudaMemPerGrid - cudaPerKernelAllocationSize - alternatingKernels device\_seeds - cudastreams + MigrateMatrix() + FlattenMatrix() + FastRandomWalk() # AllocVRAMOutputBuffer() # LaunchAsyncKernel()

# prepKernelMemoryChannel()
# GatherAsyncKernelOutput()